

Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/structure removal, replacement, and/or maintenance activities: If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or Northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required. If the Proposed Action may affect any other federally-listed or proposed species, and/or any designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please contact this Service Office.

The following species may occur in your project area and **are not** covered by this determination:

- Monarch Butterfly *Danaus plexippus* Candidate

Project Description

The following project name and description was collected in IPaC as part of the endangered species review process.

Name

SR 32 Roadway Improvements Project in Boone County (DES 1800060, 1900361, and 2101655)

Description

This project is located on SR 32 and would extend from 3.69 miles west of SR 75 to 0.5 miles west of I-65 for a total length of approximately 10.62 miles. The scope of work to be included with this project would involve a functional Hot Mix Asphalt (HMA) minor structural overlay and the addition of 4 passing lanes (2 eastbound (EB) and 2 westbound (WB)) that would each be approximately 1 mile long. The HMA overlay portion of the project (Des No. 1900361) would be located on SR 32 from 0.05 mi W of SR 75 to 0.5 mi W of I-65 and the added passing lanes portion of this project (Des No. 1800060) would be located on SR 32 from 3.69 mi W of SR 75 to 2.47 mi W of I-65. In total, the proposed improvements would involve 6.62 miles of mill and resurface and approximately 4 miles of added passing lanes (each approximately one mile in length). This project would perpetuate existing drainage where possible and there are several locations where the ditches are no longer defined. Proposed ditches would be developed in these areas during the design process. Also, new ditches would need to be established and would be required within the passing lane areas. The proposed cross section for SR 32 within the HMA overlay portion would include two 12 foot wide travel lanes with 3 foot wide paved shoulders. In the 4 areas where the passing lanes would be installed, the cross section would include three 12 foot wide travel lanes with 3 foot paved shoulders. In addition, all small structures (23 total) within the limits of the 4 passing lane locations will be evaluated during the design phase for replacement. The gas station on the southwest corner of SR 32 and SR 75 intersection has very little access control and does not have a defined exit or entrance. This project proposes to remove the existing concrete pavement from 80 feet West of SR 75 to 40 feet West of SR 75 and install raised concrete island connecting to the existing southwest corner island (Des No. 2101655). The width of the island should go from the edge of the gas station's concrete entrance to approximately the end of INDOT's right-of-way (approximately 6 feet). The height of the concrete island will be 6 inches. A secondary consideration is placing a concrete island on top of existing concrete pavement and anchoring into the pavement. All work will take place within approximately 80 feet of the existing pavement surface. Permanent right-of-way needed is expected to be approximately 50 acres and temporary right-of-way needed is anticipated to be approximately 8 acres. The Maintenance of Traffic (MOT) plan for this project is proposed to consist of phased construction to limit the impact to commuters during the passing lane construction. After the passing lanes are constructed, the HMA overlay can be constructed by utilizing flagging operations. Two-way traffic is anticipated to be maintained along SR 32. Suitable summer habitat is located adjacent to the project area. A review of the USFWS Database by the INDOT Crawfordsville District on March 3, 2021, did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. Per the field visits conducted on October 7-8, 2020, July 6, 2021, and August 26, 2021 by RQAW, no bats, or evidence of bats, were seen or heard at any of the 23 small structures and/or bridges. Refer to attached structure assessment forms for more details. Up to approximately 0.80 acres of tree clearing/trimming is anticipated for this project. All tree clearing will occur during the inactive bat season, and no tree clearing will occur beyond 100 feet from the existing pavement. The dominant tree species to be cleared includes white pine (*Pinus strobus*), silver maple (*Acer saccharinum*), white oak (*Quercus alba*), and black walnut (*Juglans nigra*). Temporary lighting may be utilized during construction. The project will not involve the replacement or installation of permanent lighting. Construction is anticipated to begin in the Fall of 2023.

Determination Key Result

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the threatened Northern long-eared bat, therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

Qualification Interview

1. Is the project within the range of the Indiana bat^[1]?

[1] See [Indiana bat species profile](#)

Automatically answered

Yes

2. Is the project within the range of the Northern long-eared bat^[1]?

[1] See [Northern long-eared bat species profile](#)

Automatically answered

Yes

3. Which Federal Agency is the lead for the action?

A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction^[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

[1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces^[1]?

[1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum^[1]?

[1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

No

7. Is the project located **within** a karst area?

No

8. Is there *any* suitable^[1] summer habitat for Indiana Bat or NLEB **within** the project action area^[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the [national consultation FAQs](#).

Yes

9. Will the project remove *any* suitable summer habitat^[1] and/or remove/trim any existing trees **within** suitable summer habitat?

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

Yes

10. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

No

11. Have presence/probable absence (P/A) summer surveys^{[1][2]} been conducted^{[3][4]} **within** the suitable habitat located within your project action area?

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate distance from hibernacula) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

[3] For projects within the range of either the Indiana bat or NLEB in which suitable habitat is present, and no bat surveys have been conducted, the transportation agency will assume presence of the appropriate species. This assumption of presence should be based upon the presence of suitable habitat and the capability of bats to occupy it because of their mobility.

[4] Negative presence/probable absence survey results obtained using the [summer survey guidance](#) are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

No

12. Does the project include activities **within documented Indiana bat habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

13. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors?

Yes

14. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors occur^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

B) During the inactive season

15. Does the project include activities **within documented NLEB habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

16. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors?

Yes

17. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors occur?

B) During the inactive season

18. Will *any* tree trimming or removal occur **within** 100 feet of existing road/rail surfaces?

Yes

19. Will *any* tree trimming or removal occur **between** 100-300 feet of existing road/rail surfaces?

No

20. Are *all* trees that are being removed clearly demarcated?

Yes

21. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?

No

22. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

No

23. Does the project include slash pile burning?

No

24. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

Yes

25. Is there *any* suitable habitat^[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's current [summer survey guidance](#) for our current definitions of suitable habitat.

Yes

26. Has a bridge assessment^[1] been conducted **within** the last 24 months^[2] to determine if the bridge is being used by bats?

[1] See [User Guide Appendix D](#) for bridge/structure assessment guidance

[2] Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

Yes

SUBMITTED DOCUMENTS

- *Structure Assessments Combined.pdf* <https://ipac.ecosphere.fws.gov/project/YBP46OYNGZASRPUCCVMUJFEAQQ/projectDocuments/104137323>

27. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)^[1]?

[1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

No

28. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

No

29. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

No

30. Will the project involve the use of **temporary** lighting *during* the active season?

Yes

31. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

Yes

32. Will the project install new or replace existing **permanent** lighting?

No

33. Does the project include percussives or other activities (**not including tree removal/trimming or bridge/structure work**) that will increase noise levels above existing traffic/background levels?

No

34. Are *all* project activities that are **not associated with** habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

Examples: lining roadways, unlighted signage, rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

Yes

35. Will the project raise the road profile **above the tree canopy**?

No

36. Are the project activities that are not associated with habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives consistent with a No Effect determination in this key?

Automatically answered

Yes, other project activities are limited to actions that DO NOT cause any additional stressors to the bat species as described in the BA/BO

37. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the tree removal/trimming that occurs outside of the Indiana bat's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

38. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the tree removal/trimming that occurs outside of the NLEB's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

39. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

Automatically answered

Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected

40. **General AMM 1**

Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

Yes

41. **Tree Removal AMM 1**

Can *all* phases/aspects of the project (e.g., temporary work areas, alignments) be modified, to the extent practicable, to avoid tree removal^[1] in excess of what is required to implement the project safely?

Note: Tree Removal AMM 1 is a minimization measure, the full implementation of which may not always be practicable. Projects may still be NLAA as long as Tree Removal AMMs 2, 3, and 4 are implemented and LAA as long as Tree Removal AMMs 3, 5, 6, and 7 are implemented.

[1] The word “trees” as used in the AMMs refers to trees that are suitable habitat for each species within their range. See the USFWS’ current summer survey guidance for our latest definitions of suitable habitat.

Yes

42. **Tree Removal AMM 3**

Can tree removal be limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits)?

Yes

43. **Tree Removal AMM 4**

Can the project avoid cutting down/removal of *all* (1) **documented**^[1] Indiana bat or NLEB roosts^[2] (that are still suitable for roosting), (2) trees **within** 0.25 miles of roosts, and (3) documented foraging habitat any time of year?

[1] The word documented means habitat where bats have actually been captured and/or tracked.

[2] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

Yes

44. **Lighting AMM 1**

Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

Yes

Project Questionnaire

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

No

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

Yes

3. How many acres^[1] of trees are proposed for removal between 0-100 feet of the existing road/rail surface?

[1] If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

0.80

4. Please describe the proposed bridge work:

all small structures (23 total) within the limits of the 4 passing lane locations will be evaluated during the design phase for replacement.

5. Please state the timing of all proposed bridge work:

Fall of 2023

6. Please enter the date of the bridge assessment:

July 6, 2021

Avoidance And Minimization Measures (AMMs)

This determination key result includes the commitment to implement the following Avoidance and Minimization Measures (AMMs):

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

TREE REMOVAL AMM 2

Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and **outside of documented** roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.

TREE REMOVAL AMM 3

Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

TREE REMOVAL AMM 4

Do not remove **documented** Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or **documented** foraging habitat any time of year.

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

TREE REMOVAL AMM 1

Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal.

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on April 22, 2021. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which may require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects](#). The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

IPaC User Contact Information

Name: Benjamin Neild
Address: 41 W. 300 N.
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State: IN
Zip: 47933
Email: bneild@indot.in.gov
Phone: 7653615259

From: Kurtz, Randy <RKurtz@indot.IN.gov>
Sent: Thursday, October 27, 2022 8:15 AM
To: Harlan Ford; Neild, Benjamin
Subject: [EXT] RE: SR 32 Passing Lanes (Lead Des No. 1800060)

****** Please use caution this is an externally originating email. ******
Do not click on links or open attachments unless you recognize the sender and know the contents are safe.

I wouldn't think you need to resubmit the IPaC for that reason unless the pipes will remove crazy amounts of trees. Ben, if you can think of a reason why, then please jump in. Otherwise, I'd say, IPaC is fine.

Randy "Zane" Kurtz
Environmental Section Manager
Capital Program Management Division
41 West 300 North
Crawfordsville, IN 47933
Office: (765)361-5232
Email: rkurtz@indot.in.gov



From: Harlan Ford <hford@rqaw.com>
Sent: Wednesday, October 26, 2022 3:08 PM
To: Kurtz, Randy <RKurtz@indot.IN.gov>; Neild, Benjamin <BNeild@indot.IN.gov>
Subject: SR 32 Passing Lanes (Lead Des No. 1800060)

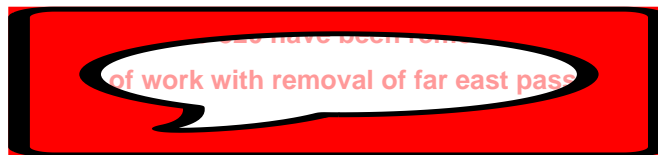
****** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ******

Hey Zane/Ben,

We have recently learned that this project will include replacing or installing new drive pipes (20 total) within the limits of the passing lane locations. This drive pipes were not included in the IPaC structure inspection table. I wanted to reach out to see if we needed to resubmit IPaC to include these additional drive pipes? If you think so, then can I get one of you to invalidate the concurrence verification letter so that I can update IPaC? See below for the list of drive pipes that have been added to this project. I have highlighted the new drive pipes that will be installed, and we will not include these in IPaC since no pipe currently exists. Additionally, some of the unnamed structures previously included in the inspection table now have CV numbers and associated Des No's. due to their proposed sizes.

Name on Plan	Ex Pipe	Proposed Size
-----------------	---------	------------------

301	12" CMP	15
302	no pipe	15
303	12" CMP	15
304	12" CMP	15
305	no pipe	15
306	15" CMP	15
307	12" CMP	15
308	12" RCP	15
309	15" CMP	15
310	8" CMP	15
311	10" CMP	15
312	12" CMP	15
313	no pipe	15
314	no pipe	15
315	12" CMP	15
316	12" CMP	15
317	15" CMP	15
318	15" CMP	15
319	15" CMP	15
320	no pipe	15



Let me know if either of you would like to discuss further.

Thanks,



HARLAN FORD

ENVIRONMENTAL SCIENTIST

O: 423.458.5979

8770 North St., Ste. 110, Fishers, IN 46038








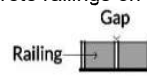

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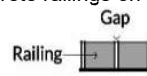

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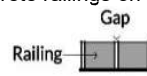

Bridge/Structure Bat Assessment Form

Date & Time of Assessment July 6, 2021;4:30pm		DOT Project Number 1800060 & 1900361		Route/Facility Carried SR 32		County Boone	
Federal Structure ID 93000305 (CV 032-006-49.90)		Structure Coordinates 40.05464, (latitude and longitude) -86.66734		Structure Height (approximate) 4ft.		Structure Length 43ft.	
Structure Type (check one)				Structure Material (check all that apply)			
Bridge Construction Style				Deck Material Beam Material End/Back Wall Material			
<input type="radio"/> Cast-in-place 		<input type="radio"/> Pre-stressed Girder 		<input type="checkbox"/> Metal		<input type="checkbox"/> None	
<input type="radio"/> Flat Slab/Box 		<input type="radio"/> Steel I-beam 		<input type="checkbox"/> Concrete		<input type="checkbox"/> Concrete	
<input type="radio"/> Truss 		<input type="radio"/> Covered 		<input type="checkbox"/> Timber		<input type="checkbox"/> Steel	
<input type="radio"/> Parallel Box Beam 		<input type="radio"/> Other:		<input type="checkbox"/> Open grid		<input type="checkbox"/> Timber	
				<input type="checkbox"/> Other:		<input type="checkbox"/> Other:	
Culvert Type				Culvert Material		Creosote Evidence	
<input checked="" type="radio"/> Box				<input type="checkbox"/> Metal		<input type="radio"/> Yes <input checked="" type="radio"/> No	
<input type="radio"/> Pipe/Round				<input checked="" type="checkbox"/> Concrete		<input type="radio"/> Unknown	
<input type="radio"/> Other:				<input type="checkbox"/> Plastic		Notes: 4 sided 8' x 4' box	
Other Structure				<input type="checkbox"/> Stone/Masonry			
Crossings Traversed (check all that apply)				Surrounding Habitat (check all that apply)			
<input type="checkbox"/> Bare ground		<input checked="" type="checkbox"/> Open vegetation		<input checked="" type="checkbox"/> Agricultural		<input type="checkbox"/> Grassland	
<input type="checkbox"/> Rip-rap		<input type="checkbox"/> Closed vegetation		<input type="checkbox"/> Commercial		<input type="checkbox"/> Ranching	
<input type="checkbox"/> Flowing water		<input type="checkbox"/> Railroad		<input type="checkbox"/> Residential-urban		<input type="checkbox"/> Riparian/wetland	
<input type="checkbox"/> Standing water		<input type="checkbox"/> Road/trail - Type:		<input checked="" type="checkbox"/> Residential-rural		<input type="checkbox"/> Mixed use	
<input type="checkbox"/> Seasonal water		<input type="checkbox"/> Other:		<input type="checkbox"/> Woodland/forested		<input type="checkbox"/> Other:	
Areas Assessed (check all that apply)							
Check all areas that apply. If an area is not present in the structure, check the "not present" box.							
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.							
Area (check if assessed)		Assessment Notes		Evidence of Bats (include photos if present)			
<input type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead #		<input type="checkbox"/> Audible <input type="checkbox"/> Species	
<input checked="" type="checkbox"/> Concrete surfaces (open roosting on concrete)				<input type="checkbox"/> Guano		<input type="checkbox"/> Odor	
				<input type="checkbox"/> Staining		<input type="checkbox"/> Photos	
<input type="checkbox"/> Spaces between concrete end walls and the bridge deck		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead #		<input type="checkbox"/> Audible <input type="checkbox"/> Species	
				<input type="checkbox"/> Guano		<input type="checkbox"/> Odor	
				<input type="checkbox"/> Staining		<input type="checkbox"/> Photos	
<input type="checkbox"/> Crack between concrete railings on top of the bridge deck 		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead #		<input type="checkbox"/> Audible <input type="checkbox"/> Species	
				<input type="checkbox"/> Guano		<input type="checkbox"/> Odor	
				<input type="checkbox"/> Staining		<input type="checkbox"/> Photos	
<input type="checkbox"/> Vertical surfaces on concrete I-beams		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead #		<input type="checkbox"/> Audible <input type="checkbox"/> Species	
				<input type="checkbox"/> Guano		<input type="checkbox"/> Odor	
				<input type="checkbox"/> Staining		<input type="checkbox"/> Photos	
<input checked="" type="checkbox"/> Spaces between walls, ceiling joists		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead #		<input type="checkbox"/> Audible <input type="checkbox"/> Species	
				<input type="checkbox"/> Guano		<input type="checkbox"/> Odor	
				<input type="checkbox"/> Staining		<input type="checkbox"/> Photos	
<input type="checkbox"/> Weep holes, scupper drains, and inlets/pipes		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead #		<input type="checkbox"/> Audible <input type="checkbox"/> Species	
				<input type="checkbox"/> Guano		<input type="checkbox"/> Odor	
				<input type="checkbox"/> Staining		<input type="checkbox"/> Photos	
<input type="checkbox"/> All guiderails		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead #		<input type="checkbox"/> Audible <input type="checkbox"/> Species	
				<input type="checkbox"/> Guano		<input type="checkbox"/> Odor	
				<input type="checkbox"/> Staining		<input type="checkbox"/> Photos	
<input type="checkbox"/> All expansion joints		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead #		<input type="checkbox"/> Audible <input type="checkbox"/> Species	
				<input type="checkbox"/> Guano		<input type="checkbox"/> Odor	
				<input type="checkbox"/> Staining		<input type="checkbox"/> Photos	
Name: Harlan Ford				Signature: 			








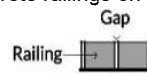

Bridge/Structure Bat Assessment Form

Date & Time of Assessment July 6, 2021; 4:00pm		DOT Project Number 1800060 & 1900361		Route/Facility Carried SR 32		County Boone	
Federal Structure ID 93000453 (CV 032-006-50.00)		Structure Coordinates 40.05463, (latitude and longitude) -86.66480		Structure Height (approximate) 3.5ft.		Structure Length 46ft.	
Structure Type (check one)				Structure Material (check all that apply)			
Bridge Construction Style				Deck Material		Beam Material	
<input type="radio"/> Cast-in-place  <input type="radio"/> Pre-stressed Girder 				<input type="checkbox"/> Metal <input type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Open grid <input type="checkbox"/> Other:		<input type="checkbox"/> None <input type="checkbox"/> Concrete <input type="checkbox"/> Steel <input type="checkbox"/> Timber <input type="checkbox"/> Other:	
<input type="radio"/> Flat Slab/Box  <input type="radio"/> Steel I-beam 						<input type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:	
<input type="radio"/> Truss  <input type="radio"/> Covered 						Creosote Evidence <input type="radio"/> Yes <input checked="" type="radio"/> No	
<input type="radio"/> Parallel Box Beam  <input type="radio"/> Other:				Culvert Material		<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	
Culvert Type		Other Structure		<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Plastic <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:		Notes: 4 sided 5' X3.5' box	
<input type="radio"/> Box <input type="radio"/> Pipe/Round <input checked="" type="radio"/> Other:		<input type="radio"/> Other:					
Crossings Traversed (check all that apply)				Surrounding Habitat (check all that apply)			
<input type="checkbox"/> Bare ground <input type="checkbox"/> Rip-rap <input type="checkbox"/> Flowing water <input type="checkbox"/> Standing water <input type="checkbox"/> Seasonal water				<input checked="" type="checkbox"/> Open vegetation <input type="checkbox"/> Closed vegetation <input type="checkbox"/> Railroad <input type="checkbox"/> Road/trail - Type: <input type="checkbox"/> Other:			
				<input checked="" type="checkbox"/> Agricultural <input type="checkbox"/> Commercial <input type="checkbox"/> Residential-urban <input checked="" type="checkbox"/> Residential-rural <input type="checkbox"/> Woodland/forested			
				<input type="checkbox"/> Grassland <input type="checkbox"/> Ranching <input type="checkbox"/> Riparian/wetland <input type="checkbox"/> Mixed use <input type="checkbox"/> Other:			
Areas Assessed (check all that apply)							
Check all areas that apply. If an area is not present in the structure, check the "not present" box.							
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.							
Area (check if assessed)		Assessment Notes		Evidence of Bats (include photos if present)			
<input type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Concrete surfaces (open roosting on concrete)		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Spaces between concrete end walls and the bridge deck		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Crack between concrete railings on top of the bridge deck 		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Vertical surfaces on concrete I-beams		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between walls, ceiling joists		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Weep holes, scupper drains, and inlets/pipes		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> All guiderails		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> All expansion joints		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
Name: Harlan Ford				Signature: 			








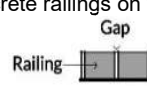

Bridge/Structure Bat Assessment Form

Date & Time of Assessment July 6, 2021; 3:00pm		DOT Project Number 1800060 & 1900361		Route/Facility Carried SR 32		County Boone	
Federal Structure ID 93000329 (CV 032-006-53.38)		Structure Coordinates 40.05423, (latitude and longitude) -86.60195		Structure Height (approximate) 3ft.		Structure Length 42ft.	
Structure Type (check one)				Structure Material (check all that apply)			
Bridge Construction Style				Deck Material		Beam Material	
<input type="radio"/> Cast-in-place 		<input type="radio"/> Pre-stressed Girder 		<input type="checkbox"/> Metal <input type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Open grid <input type="checkbox"/> Other:		<input type="checkbox"/> None <input type="checkbox"/> Concrete <input type="checkbox"/> Steel <input type="checkbox"/> Timber <input type="checkbox"/> Other:	
<input type="radio"/> Flat Slab/Box 		<input type="radio"/> Steel I-beam 				<input type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:	
<input type="radio"/> Truss 		<input type="radio"/> Covered 				Creosote Evidence <input type="radio"/> Yes <input checked="" type="radio"/> No	
<input type="radio"/> Parallel Box Beam 		<input type="radio"/> Other:		Culvert Material <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Plastic <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:		<input type="radio"/> Unknown Notes: 4 sided 5' x3' box	
Culvert Type				Other Structure			
<input checked="" type="radio"/> Box <input type="radio"/> Pipe/Round <input type="radio"/> Other:				<input type="radio"/>			
Crossings Traversed (check all that apply)				Surrounding Habitat (check all that apply)			
<input type="checkbox"/> Bare ground <input type="checkbox"/> Rip-rap <input type="checkbox"/> Flowing water <input type="checkbox"/> Standing water <input type="checkbox"/> Seasonal water		<input checked="" type="checkbox"/> Open vegetation <input type="checkbox"/> Closed vegetation <input type="checkbox"/> Railroad <input type="checkbox"/> Road/trail - Type: <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Agricultural <input type="checkbox"/> Commercial <input type="checkbox"/> Residential-urban <input checked="" type="checkbox"/> Residential-rural <input type="checkbox"/> Woodland/forested		<input type="checkbox"/> Grassland <input type="checkbox"/> Ranching <input type="checkbox"/> Riparian/wetland <input type="checkbox"/> Mixed use <input type="checkbox"/> Other:	
Areas Assessed (check all that apply)							
Check all areas that apply. If an area is not present in the structure, check the "not present" box.							
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.							
Area (check if assessed)		Assessment Notes		Evidence of Bats (include photos if present)			
<input type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Concrete surfaces (open roosting on concrete)		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Spaces between concrete end walls and the bridge deck		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Crack between concrete railings on top of the bridge deck 		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Vertical surfaces on concrete I-beams		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between walls, ceiling joists		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Weep holes, scupper drains, and inlets/pipes		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> All guiderails		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> All expansion joints		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
Name: Harlan Ford				Signature: 			








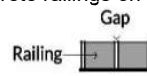

Bridge/Structure Bat Assessment Form

Date & Time of Assessment July 6, 2021; 2:30pm		DOT Project Number 1800060 & 1900361		Route/Facility Carried SR 32		County Boone	
Federal Structure ID 93000305 (CV 032-006-53.90)		Structure Coordinates 40.05429, (latitude and longitude) -86.59214		Structure Height (approximate) 8.4ft.		Structure Length 50ft.	
Structure Type (check one)				Structure Material (check all that apply)			
Bridge Construction Style				Deck Material		Beam Material	
<input type="radio"/> Cast-in-place  <input type="radio"/> Pre-stressed Girder 				<input type="checkbox"/> Metal <input type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Open grid <input type="checkbox"/> Other:		<input type="checkbox"/> None <input type="checkbox"/> Concrete <input type="checkbox"/> Steel <input type="checkbox"/> Timber <input type="checkbox"/> Other:	
<input type="radio"/> Flat Slab/Box  <input type="radio"/> Steel I-beam 						<input type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:	
<input type="radio"/> Truss  <input type="radio"/> Covered 						Creosote Evidence <input type="radio"/> Yes <input checked="" type="radio"/> No	
<input type="radio"/> Parallel Box Beam  <input type="radio"/> Other:				Culvert Material		<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	
Culvert Type		Other Structure		<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Plastic <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:		Notes: 17' long concrete slabtop	
<input type="radio"/> Box <input type="radio"/> Pipe/Round <input checked="" type="radio"/> Other: Concrete slab top culvert		<input type="radio"/> Other:					
Crossings Traversed (check all that apply)				Surrounding Habitat (check all that apply)			
<input type="checkbox"/> Bare ground <input checked="" type="checkbox"/> Rip-rap <input checked="" type="checkbox"/> Flowing water <input type="checkbox"/> Standing water <input type="checkbox"/> Seasonal water				<input checked="" type="checkbox"/> Open vegetation <input type="checkbox"/> Closed vegetation <input type="checkbox"/> Railroad <input type="checkbox"/> Road/trail - Type: <input type="checkbox"/> Other:			
				<input checked="" type="checkbox"/> Agricultural <input type="checkbox"/> Commercial <input type="checkbox"/> Residential-urban <input checked="" type="checkbox"/> Residential-rural <input type="checkbox"/> Woodland/forested			
				<input type="checkbox"/> Grassland <input type="checkbox"/> Ranching <input checked="" type="checkbox"/> Riparian/wetland <input type="checkbox"/> Mixed use <input type="checkbox"/> Other:			
Areas Assessed (check all that apply)							
Check all areas that apply. If an area is not present in the structure, check the "not present" box.							
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.							
Area (check if assessed)		Assessment Notes		Evidence of Bats (include photos if present)			
<input type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Concrete surfaces (open roosting on concrete)		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between concrete end walls and the bridge deck		<input type="checkbox"/> Not present Even-though this is a culvert it does have a slap top with spaces at concrete end walls.		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Crack between concrete railings on top of the bridge deck 		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Vertical surfaces on concrete I-beams		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between walls, ceiling joists		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Weep holes, scupper drains, and inlets/pipes		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> All guiderails		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> All expansion joints		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
Name: Harlan Ford				Signature: 			








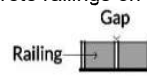

Bridge/Structure Bat Assessment Form

Date & Time of Assessment July 6, 2021; 2:00pm		DOT Project Number 1800060 & 1900361		Route/Facility Carried SR 32		County Boone	
Federal Structure ID 93000454 (CV 032-006-54.25)		Structure Coordinates 40.05423, (latitude and longitude) -86.58552		Structure Height (approximate) 6.6ft.		Structure Length 42ft.	
Structure Type (check one)				Structure Material (check all that apply)			
Bridge Construction Style				Deck Material		Beam Material	
<input type="radio"/> Cast-in-place 		<input type="radio"/> Pre-stressed Girder 		<input type="checkbox"/> Metal <input type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Open grid <input type="checkbox"/> Other:		<input type="checkbox"/> None <input type="checkbox"/> Concrete <input type="checkbox"/> Steel <input type="checkbox"/> Timber <input type="checkbox"/> Other:	
<input type="radio"/> Flat Slab/Box 		<input type="radio"/> Steel I-beam 		<input type="checkbox"/> Concrete <input type="checkbox"/> Plastic <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:		<input type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:	
<input type="radio"/> Truss 		<input type="radio"/> Covered 				Creosote Evidence <input type="radio"/> Yes <input checked="" type="radio"/> No	
<input type="radio"/> Parallel Box Beam 		<input type="radio"/> Other:		Culvert Material		<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	
Culvert Type		Other Structure		<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Plastic <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:		Notes: 12' long concrete slabtop	
<input type="radio"/> Box <input type="radio"/> Pipe/Round <input checked="" type="radio"/> Other: Concrete slab top culvert		<input type="radio"/>					
Crossings Traversed (check all that apply)				Surrounding Habitat (check all that apply)			
<input type="checkbox"/> Bare ground <input checked="" type="checkbox"/> Rip-rap <input type="checkbox"/> Flowing water <input type="checkbox"/> Standing water <input checked="" type="checkbox"/> Seasonal water		<input checked="" type="checkbox"/> Open vegetation <input type="checkbox"/> Closed vegetation <input type="checkbox"/> Railroad <input type="checkbox"/> Road/trail - Type: <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Agricultural <input type="checkbox"/> Commercial <input type="checkbox"/> Residential-urban <input checked="" type="checkbox"/> Residential-rural <input type="checkbox"/> Woodland/forested		<input type="checkbox"/> Grassland <input type="checkbox"/> Ranching <input checked="" type="checkbox"/> Riparian/wetland <input type="checkbox"/> Mixed use <input type="checkbox"/> Other:	
Areas Assessed (check all that apply)							
Check all areas that apply. If an area is not present in the structure, check the "not present" box.							
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.							
Area (check if assessed)		Assessment Notes		Evidence of Bats (include photos if present)			
<input type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Concrete surfaces (open roosting on concrete)		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between concrete end walls and the bridge deck		<input type="checkbox"/> Not present Even-though this is a culvert it does have a slap top with spaces at concrete end walls.		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Crack between concrete railings on top of the bridge deck 		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Vertical surfaces on concrete I-beams		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between walls, ceiling joists		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Weep holes, scupper drains, and inlets/pipes		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> All guiderails		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> All expansion joints		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
Name: Harlan Ford				Signature: 			










Bridge/Structure Bat Assessment Form

Date & Time of Assessment July 6, 2021; 1:30pm		DOT Project Number 1800060 & 1900361		Route/Facility Carried SR 32		County Boone	
Federal Structure ID 93000305 (CV 032-006-54.47)		Structure Coordinates 40.05414, (latitude and longitude) -86.58137		Structure Height (approximate) 3ft.		Structure Length 41ft.	
Structure Type (check one)				Structure Material (check all that apply)			
Bridge Construction Style				Deck Material		Beam Material	
<input type="radio"/> Cast-in-place  <input type="radio"/> Pre-stressed Girder 				<input type="checkbox"/> Metal <input type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Open grid <input type="checkbox"/> Other:		<input type="checkbox"/> None <input type="checkbox"/> Concrete <input type="checkbox"/> Steel <input type="checkbox"/> Timber <input type="checkbox"/> Other:	
<input type="radio"/> Flat Slab/Box  <input type="radio"/> Steel I-beam 						<input type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:	
<input type="radio"/> Truss  <input type="radio"/> Covered 						Creosote Evidence <input type="radio"/> Yes <input checked="" type="radio"/> No	
<input type="radio"/> Parallel Box Beam  <input type="radio"/> Other:				Culvert Material		<input type="radio"/> Metal <input checked="" type="radio"/> Concrete <input type="checkbox"/> Plastic <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:	
Culvert Type		Other Structure				Notes: 4 sided 6' x 3' box culvert	
<input checked="" type="radio"/> Box <input type="radio"/> Pipe/Round <input type="radio"/> Other:		<input type="radio"/>					
Crossings Traversed (check all that apply)				Surrounding Habitat (check all that apply)			
<input type="checkbox"/> Bare ground <input type="checkbox"/> Rip-rap <input type="checkbox"/> Flowing water <input type="checkbox"/> Standing water <input type="checkbox"/> Seasonal water				<input checked="" type="checkbox"/> Open vegetation <input type="checkbox"/> Closed vegetation <input type="checkbox"/> Railroad <input type="checkbox"/> Road/trail - Type: <input type="checkbox"/> Other:			
				<input checked="" type="checkbox"/> Agricultural <input type="checkbox"/> Commercial <input type="checkbox"/> Residential-urban <input checked="" type="checkbox"/> Residential-rural <input type="checkbox"/> Woodland/forested			
				<input type="checkbox"/> Grassland <input type="checkbox"/> Ranching <input type="checkbox"/> Riparian/wetland <input type="checkbox"/> Mixed use <input type="checkbox"/> Other:			
Areas Assessed (check all that apply)							
Check all areas that apply. If an area is not present in the structure, check the "not present" box.							
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.							
Area (check if assessed)		Assessment Notes		Evidence of Bats (include photos if present)			
<input type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Concrete surfaces (open roosting on concrete)		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Spaces between concrete end walls and the bridge deck		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Crack between concrete railings on top of the bridge deck 		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Vertical surfaces on concrete I-beams		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between walls, ceiling joists		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Weep holes, scupper drains, and inlets/pipes		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> All guiderails		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> All expansion joints		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
Name: Harlan Ford				Signature: 			










Bridge/Structure Bat Assessment Form

Date & Time of Assessment July 6, 2021; 12:30pm		DOT Project Number 1800060 & 1900361		Route/Facility Carried SR 32		County Boone	
Federal Structure ID 93000484 (CV 032-006-57.29)		Structure Coordinates 40.05348, (latitude and longitude) -86.52867		Structure Height (approximate) 3ft.		Structure Length 54ft.	
Structure Type (check one)				Structure Material (check all that apply)			
Bridge Construction Style				Deck Material		Beam Material	
<input type="radio"/> Cast-in-place  <input type="radio"/> Pre-stressed Girder 				<input type="checkbox"/> Metal <input type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Open grid <input type="checkbox"/> Other:		<input type="checkbox"/> None <input type="checkbox"/> Concrete <input type="checkbox"/> Steel <input type="checkbox"/> Timber <input type="checkbox"/> Other:	
<input type="radio"/> Flat Slab/Box  <input type="radio"/> Steel I-beam 						<input type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:	
<input type="radio"/> Truss  <input type="radio"/> Covered 						Creosote Evidence <input type="radio"/> Yes <input checked="" type="radio"/> No	
<input type="radio"/> Parallel Box Beam  <input type="radio"/> Other:				Culvert Material		<input type="radio"/> Metal <input checked="" type="radio"/> Concrete <input type="checkbox"/> Plastic <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:	
Culvert Type		Other Structure				Notes: 4 sided 4' x 3' box culvert	
<input checked="" type="radio"/> Box <input type="radio"/> Pipe/Round <input type="radio"/> Other:		<input type="radio"/>					
Crossings Traversed (check all that apply)				Surrounding Habitat (check all that apply)			
<input type="checkbox"/> Bare ground <input type="checkbox"/> Rip-rap <input type="checkbox"/> Flowing water <input type="checkbox"/> Standing water <input type="checkbox"/> Seasonal water				<input checked="" type="checkbox"/> Open vegetation <input type="checkbox"/> Closed vegetation <input type="checkbox"/> Railroad <input type="checkbox"/> Road/trail - Type: <input type="checkbox"/> Other:			
				<input checked="" type="checkbox"/> Agricultural <input type="checkbox"/> Commercial <input type="checkbox"/> Residential-urban <input checked="" type="checkbox"/> Residential-rural <input type="checkbox"/> Woodland/forested			
				<input type="checkbox"/> Grassland <input type="checkbox"/> Ranching <input type="checkbox"/> Riparian/wetland <input type="checkbox"/> Mixed use <input type="checkbox"/> Other:			
Areas Assessed (check all that apply)							
Check all areas that apply. If an area is not present in the structure, check the "not present" box.							
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.							
Area (check if assessed)		Assessment Notes		Evidence of Bats (include photos if present)			
<input type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Concrete surfaces (open roosting on concrete)		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Spaces between concrete end walls and the bridge deck		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Crack between concrete railings on top of the bridge deck 		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Vertical surfaces on concrete I-beams		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between walls, ceiling joists		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Weep holes, scupper drains, and inlets/pipes		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> All guiderails		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> All expansion joints		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
Name: Harlan Ford				Signature: 			










Bridge/Structure Bat Assessment Form

Date & Time of Assessment July 6, 2021; 3:30pm		DOT Project Number 1800060 & 1900361		Route/Facility Carried SR 32		County Boone	
Federal Structure ID 010530(032-06-06712)		Structure Coordinates 40.05439, (latitude and longitude) -86.62283		Structure Height (approximate) 10ft.		Structure Length 65ft.	
Structure Type (check one)				Structure Material (check all that apply)			
Bridge Construction Style				Deck Material		Beam Material	
<input type="radio"/> Cast-in-place 		<input type="radio"/> Pre-stressed Girder 		<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Open grid <input type="checkbox"/> Other:		<input type="checkbox"/> None <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Steel <input type="checkbox"/> Timber <input type="checkbox"/> Other:	
<input type="radio"/> Flat Slab/Box 		<input type="radio"/> Steel I-beam 		<input type="checkbox"/> End/Back Wall Material <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:		Creosote Evidence <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	
<input type="radio"/> Truss 		<input type="radio"/> Covered 					
<input type="radio"/> Parallel Box Beam 		<input type="radio"/> Other:		Culvert Material		Notes:	
Culvert Type		Other Structure		<input type="checkbox"/> Metal <input type="checkbox"/> Concrete <input type="checkbox"/> Plastic <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:			
<input type="radio"/> Box <input type="radio"/> Pipe/Round <input type="radio"/> Other:		<input type="radio"/> <input type="radio"/> <input type="radio"/> Other:					
Crossings Traversed (check all that apply)				Surrounding Habitat (check all that apply)			
<input type="checkbox"/> Bare ground <input checked="" type="checkbox"/> Rip-rap <input checked="" type="checkbox"/> Flowing water <input type="checkbox"/> Standing water <input type="checkbox"/> Seasonal water		<input checked="" type="checkbox"/> Open vegetation <input type="checkbox"/> Closed vegetation <input type="checkbox"/> Railroad <input type="checkbox"/> Road/trail - Type: <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Agricultural <input type="checkbox"/> Commercial <input type="checkbox"/> Residential-urban <input checked="" type="checkbox"/> Residential-rural <input type="checkbox"/> Woodland/forested		<input type="checkbox"/> Grassland <input type="checkbox"/> Ranching <input checked="" type="checkbox"/> Riparian/wetland <input type="checkbox"/> Mixed use <input type="checkbox"/> Other:	
Areas Assessed (check all that apply)							
Check all areas that apply. If an area is not present in the structure, check the "not present" box.							
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.							
Area (check if assessed)		Assessment Notes		Evidence of Bats (include photos if present)			
<input type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Concrete surfaces (open roosting on concrete)		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between concrete end walls and the bridge deck		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Crack between concrete railings on top of the bridge deck <div style="text-align: center;">  </div>		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Vertical surfaces on concrete I-beams		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between walls, ceiling joists		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Weep holes, scupper drains, and inlets/pipes		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> All guiderails		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> All expansion joints		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
Name: Harlan Ford				Signature: 			










Bridge/Structure Bat Assessment Form

Date & Time of Assessment July 6, 2021; 12:00pm		DOT Project Number 1800060 & 1900361		Route/Facility Carried SR 32		County Boone	
Federal Structure ID 010550 (032-06-08498)		Structure Coordinates 40.04660, (latitude and longitude) -86.49880		Structure Height (approximate) 12ft.		Structure Length 87ft.	
Structure Type (check one)				Structure Material (check all that apply)			
Bridge Construction Style				Deck Material		Beam Material	
<input type="radio"/> Cast-in-place 		<input type="radio"/> Pre-stressed Girder 		<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Open grid <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> None <input type="checkbox"/> Concrete <input type="checkbox"/> Steel <input type="checkbox"/> Timber <input type="checkbox"/> Other:	
<input checked="" type="radio"/> Flat Slab/Box 		<input type="radio"/> Steel I-beam 		Culvert Material <input type="checkbox"/> Metal <input type="checkbox"/> Concrete <input type="checkbox"/> Plastic <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:		<input type="checkbox"/> End/Back Wall Material <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:	
<input type="radio"/> Truss 		<input type="radio"/> Covered 				Creosote Evidence <input type="radio"/> Yes <input checked="" type="radio"/> No	
<input type="radio"/> Parallel Box Beam 		<input type="radio"/> Other:		Notes:			
Culvert Type		Other Structure					
<input type="radio"/> Box <input type="radio"/> Pipe/Round <input type="radio"/> Other:		<input type="radio"/> Box <input type="radio"/> Pipe/Round <input type="radio"/> Other:					
Crossings Traversed (check all that apply)				Surrounding Habitat (check all that apply)			
<input type="checkbox"/> Bare ground <input checked="" type="checkbox"/> Rip-rap <input checked="" type="checkbox"/> Flowing water <input type="checkbox"/> Standing water <input type="checkbox"/> Seasonal water		<input checked="" type="checkbox"/> Open vegetation <input type="checkbox"/> Closed vegetation <input type="checkbox"/> Railroad <input type="checkbox"/> Road/trail - Type: <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Agricultural <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential-urban <input type="checkbox"/> Residential-rural <input type="checkbox"/> Woodland/forested		<input type="checkbox"/> Grassland <input type="checkbox"/> Ranching <input type="checkbox"/> Riparian/wetland <input type="checkbox"/> Mixed use <input type="checkbox"/> Other:	
Areas Assessed (check all that apply)							
Check all areas that apply. If an area is not present in the structure, check the "not present" box.							
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.							
Area (check if assessed)		Assessment Notes		Evidence of Bats (include photos if present)			
<input type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Concrete surfaces (open roosting on concrete)		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between concrete end walls and the bridge deck		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Crack between concrete railings on top of the bridge deck <div style="text-align: center;">  </div>		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Vertical surfaces on concrete I-beams		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between walls, ceiling joists		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Weep holes, scupper drains, and inlets/pipes		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> All guiderails		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> All expansion joints		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
Name: Harlan Ford				Signature: 			

Bridge/Structure Bat Assessment Form

Date & Time of Assessment July 6, 2021; 5:00pm		DOT Project Number 1800060 & 1900361		Route/Facility Carried SR 32		County Boone	
Federal Structure ID 010520(032-06-06711 A)		Structure Coordinates 40.05463, (latitude and longitude) -86.66828		Structure Height (approximate) 10ft.		Structure Length 67ft.	
Structure Type (check one)				Structure Material (check all that apply)			
Bridge Construction Style				Deck Material			
<input type="radio"/> Cast-in-place 		<input type="radio"/> Pre-stressed Girder 		<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Open grid <input type="checkbox"/> Other:		Beam Material <input checked="" type="checkbox"/> None <input type="checkbox"/> Concrete <input type="checkbox"/> Steel <input type="checkbox"/> Timber <input type="checkbox"/> Other:	
<input checked="" type="radio"/> Flat Slab/Box 		<input type="radio"/> Steel I-beam 		End/Back Wall Material <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:		Creosote Evidence <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	
<input type="radio"/> Truss 		<input type="radio"/> Covered 					
<input type="radio"/> Parallel Box Beam 		<input type="radio"/> Other:		Culvert Material		Notes:	
Culvert Type		Other Structure		<input type="checkbox"/> Metal <input type="checkbox"/> Concrete <input type="checkbox"/> Plastic <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:			
<input type="radio"/> Box <input type="radio"/> Pipe/Round <input type="radio"/> Other:		<input type="radio"/> <input type="radio"/> <input type="radio"/> Other:					
Crossings Traversed (check all that apply)				Surrounding Habitat (check all that apply)			
<input type="checkbox"/> Bare ground <input checked="" type="checkbox"/> Rip-rap <input checked="" type="checkbox"/> Flowing water <input type="checkbox"/> Standing water <input type="checkbox"/> Seasonal water		<input checked="" type="checkbox"/> Open vegetation <input type="checkbox"/> Closed vegetation <input type="checkbox"/> Railroad <input type="checkbox"/> Road/trail - Type: <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Agricultural <input type="checkbox"/> Commercial <input type="checkbox"/> Residential-urban <input checked="" type="checkbox"/> Residential-rural <input type="checkbox"/> Woodland/forested		<input type="checkbox"/> Grassland <input type="checkbox"/> Ranching <input checked="" type="checkbox"/> Riparian/wetland <input type="checkbox"/> Mixed use <input type="checkbox"/> Other:	
Areas Assessed (check all that apply)							
Check all areas that apply. If an area is not present in the structure, check the "not present" box.							
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.							
Area (check if assessed)		Assessment Notes		Evidence of Bats (include photos if present)			
<input type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Concrete surfaces (open roosting on concrete)		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between concrete end walls and the bridge deck		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Crack between concrete railings on top of the bridge deck <div style="text-align: center;">  </div>		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Vertical surfaces on concrete I-beams		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between walls, ceiling joists		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Weep holes, scupper drains, and inlets/pipes		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> All guiderails		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> All expansion joints		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
Name: Harlan Ford				Signature: 			

Bridge/Structure Bat Assessment Form

Date & Time of Assessment July 6, 2021; 1:00pm		DOT Project Number 1800060 & 1900361		Route/Facility Carried SR 32		County Boone	
Federal Structure ID 010540 (032-06-00583 C)		Structure Coordinates 40.05405, (latitude and longitude) -86.56955		Structure Height (approximate) 10ft.		Structure Length 26ft.	
Structure Type (check one)				Structure Material (check all that apply)			
Bridge Construction Style				Deck Material		Beam Material	
<input type="radio"/> Cast-in-place 		<input type="radio"/> Pre-stressed Girder 		<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Open grid <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> None <input type="checkbox"/> Concrete <input type="checkbox"/> Steel <input type="checkbox"/> Timber <input type="checkbox"/> Other:	
<input checked="" type="radio"/> Flat Slab/Box 		<input type="radio"/> Steel I-beam 		Culvert Material <input type="checkbox"/> Metal <input type="checkbox"/> Concrete <input type="checkbox"/> Plastic <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:		<input type="checkbox"/> Concrete <input type="checkbox"/> Timber <input type="checkbox"/> Stone/Masonry <input type="checkbox"/> Other:	
<input type="radio"/> Truss 		<input type="radio"/> Covered 				Creosote Evidence <input type="radio"/> Yes <input checked="" type="radio"/> No	
<input type="radio"/> Parallel Box Beam 		<input type="radio"/> Other:		Notes:			
Culvert Type		Other Structure					
<input type="radio"/> Box <input type="radio"/> Pipe/Round <input type="radio"/> Other:		<input type="radio"/> Box <input type="radio"/> Pipe/Round <input type="radio"/> Other:					
Crossings Traversed (check all that apply)				Surrounding Habitat (check all that apply)			
<input type="checkbox"/> Bare ground <input checked="" type="checkbox"/> Rip-rap <input checked="" type="checkbox"/> Flowing water <input type="checkbox"/> Standing water <input type="checkbox"/> Seasonal water		<input checked="" type="checkbox"/> Open vegetation <input type="checkbox"/> Closed vegetation <input type="checkbox"/> Railroad <input type="checkbox"/> Road/trail - Type: <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Agricultural <input type="checkbox"/> Commercial <input type="checkbox"/> Residential-urban <input checked="" type="checkbox"/> Residential-rural <input type="checkbox"/> Woodland/forested		<input type="checkbox"/> Grassland <input type="checkbox"/> Ranching <input checked="" type="checkbox"/> Riparian/wetland <input type="checkbox"/> Mixed use <input type="checkbox"/> Other:	
Areas Assessed (check all that apply)							
Check all areas that apply. If an area is not present in the structure, check the "not present" box.							
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.							
Area (check if assessed)		Assessment Notes		Evidence of Bats (include photos if present)			
<input type="checkbox"/> All crevices and cracks: Bridges/culverts: rough surfaces or imperfections in concrete Other structures: soffits, rafters, attic areas		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Concrete surfaces (open roosting on concrete)		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between concrete end walls and the bridge deck		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Crack between concrete railings on top of the bridge deck <div style="text-align: center;">  </div>		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input type="checkbox"/> Vertical surfaces on concrete I-beams		<input checked="" type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Spaces between walls, ceiling joists		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> Weep holes, scupper drains, and inlets/pipes		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> All guiderails		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
<input checked="" type="checkbox"/> All expansion joints		<input type="checkbox"/> Not present		<input type="checkbox"/> Visual - live # dead # <input type="checkbox"/> Guano <input type="checkbox"/> Staining <input type="checkbox"/> Audible <input type="checkbox"/> Odor <input type="checkbox"/> Photos <input type="checkbox"/> Species			
Name: Harlan Ford				Signature: 			

No.	Structure Number	Location	Waterbody	Inspection Date	Existing Structure	Length (ft)	Work Type	Evidence of bats?
1	Unnammed	638+67.23	N/A	7/6/2021	1.25' Concrete pipe	47.15	Replacement	No
2	Unnammed	646+94.68	N/A	7/6/2021	1.25' CMP	55.07	Replacement	No
3	Unnammed	678+68.46	N/A	7/6/2021	2' CMP	40.1	Replacement	No
4	Unnammed	680+35.56	N/A	7/6/2021	1.25' CMP	49.5	Replacement	No
5	Unnammed	754+03.08	N/A	7/6/2021	1.5' Concrete pipe	50.8	Replacement	No
6	Unnammed	791+60.59	N/A	7/6/2021	2.5' CMP	53	Replacement	No
7	Unnammed	796+40.21	N/A	7/6/2021	1.5' Concrete pipe	42.45	Replacement	No
8	Unnammed	28+19.41	N/A	7/6/2021	1.5' Concrete pipe	43.7	Replacement	No
9	Unnammed	41+44.54	N/A	7/6/2021	2' X 1' CMP	47	Replacement	No
10	Unnammed	73+41.09	N/A	7/6/2021	2' x 1.25' Concrete pipe	47.3	Replacement	No
11	Unnammed	242+77.31	N/A	7/6/2021	2' x 1.5' CMP	46.96	Replacement	No
12	Unnammed	257+75.21	N/A	7/6/2021	2' x 1.5 Concrete Pipe	47.15	Replacement	No

Categorical Exclusion

Appendix D

**Section 106 of the National Historic
Preservation Act (NHPA)**

Minor Projects PA Project Assessment Form

Date: 10/18/2021

*UPDATE: 6/9/2022

**UPDATE: 12/16/2022

9/2023, RQA

Project Designation Number: 1800060 (lead) & 1900361

Route Number: SR 32

Project Description: Auxiliary/Passing Lanes Project from 3.69 miles west of SR 75 to 2.47 miles west of I-65 and HMA Overlay, Minor Structural from 0.05 mile west of SR 75 to 0.5 mile west of I-65

The Federal Highway Administration (FHWA) and Indiana Department of Transportation (INDOT), propose to proceed with auxiliary lanes (passing lanes) and minor structural overlay project on SR 32, starting approximately 3.69 miles west of SR 75 junction to approximately 0.5 mile west of I-65 in Boone County, Indiana.

The preferred alternative ^{three (3)} involve a functional hot mix asphalt ¹ (HMA) minor structural overlay and the addition of ~~four (4)~~ passing lanes [2 eastbound (EB) and 2 westbound (WB)] that would each be approximately one mile long. The HMA overlay portion of the project (Des No. 1900361) would be located on SR 32 from 0.05 mi W of SR 75 to 0.5 mi W of I-65 and the added passing lanes portion of this project (Des No. 1800060) would be located on SR 32 from 3.69 mi W of SR 75 to ~~2.47 mi W of I-65~~. In total, the proposed improvements would involve 6.62 miles of mill and resurface and approximately ~~4~~ miles of added passing lanes. 1 mi E of SR

³ The proposed cross-section for SR 32 within the HMA overlay ^{three (3)} portion would include two 12-foot-wide travel lanes with 3-foot-wide paved shoulders. In the ~~four (4)~~ areas where the passing lanes would be installed, the cross-section would include three 12-foot-wide travel lanes with 3-foot paved shoulders.

^{three (3)} The ~~four (4)~~ passing lanes will be constructed at the following various locations along SR 32: 1) Passing Lane 1 (eastbound) starts approximately 0.57 mile east of County Road (CR) 1175 West and extends to 0.10 mile west of CR 1050 West; 2) Passing Lane 2 (westbound) starts approximately 0.53 mile east of CR 1000 West and extends to approximately 0.50 mile west of SR 75; 3) Passing Lane 3 (eastbound) starts approximately 0.30 mile east of SR 75 and extends to 0.40 mile east of CR 700 West; ~~and 4) Passing Lane 4 (westbound) starts approximately 0.34 mile west of CR 400 West and extends to 0.08 mile west of CR 325 West.~~

^{three} This project would perpetuate the existing drainage where possible and there are several locations where the ditches are no longer defined. The extent of proposed ditch regrading is being developed during the design process. Also, new ditches need to be established ^{three} and ~~are required~~ within the passing lane areas. In addition, the small structures within the limits of the ~~four~~ passing lane locations are being evaluated for replacement during the design phase, including an INDOT small structure, Culvert Number CV 032-006-53.38. Please see the table below for a list of these small structures.

Feature Crossed	Str. No.	INDOT Culvert Number	Existing Size/Type	Proposed Size/Type/Notes
SR 32	10		15" Concrete Pipe	30" Concrete Pipe
SR 32	11		15" CMP	3'x3' RCB
SR 32	12		24" CMP	4'x3' RCB
SR 32	13		15" Concrete Pipe	18" CMP
SR 32	14		18" Concrete Pipe	4'x3' RCB
SR 32	15		30" CMP	5'x3' RCB

sed 9-23-08

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SR 32	16		18" Concrete Pipe	7'x3' RCB
SR 32	17		18" Concrete Pipe	3'x3' RCB
SR 32	18		Dual 12" Concrete Pipes	14'x4' RCB
SR 32	19	CV 032-006-53.38	5'x3' RCB Culvert	17'x4' RCB
SR 32	20		Dual 15" Concrete Pipes	10'x5' RCB
SR 32	21	-	Dual 18" Concrete Pipes	13'x4' RCB
SR 32	22	-	Dual 18" Concrete Pipes	8'x3' RCB

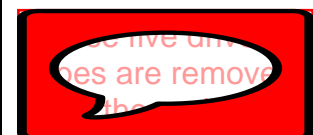


The existing right-of-way is considered to be at the centerline of the existing pavement. Additional right-of-way is anticipated to be necessary, but further investigation on the exact amount of right-of-way to be acquired is needed.

*On 4/26/2022, INDOT-CRO was informed that there had been some scope changes and right-of-way-modifications for this project. Ditch regrading is no longer proposed. However, new ditches will still be established where passing lanes are constructed. Some additional proposed right-of-way areas occur outside of the original archaeology survey area so an addendum to the Phase Ia Archaeological Reconnaissance was completed; see below for details. Categories B-3 and B-9 of the Minor Projects PA still apply.

**On 10/27/2022, INDOT-CRO was informed of addition work that will be completed as part of the project. In addition to the small structure replacements previously documented, the pipes underneath residential driveways and field entrances will also be installed or replaced within the passing lane limits of the project:

Structure No. on Plans	Existing Drive Pipe Size	Proposed Pipe Size
301	12" CMP	15"
302	no existing pipe	15"
303	12" CMP	15"
304	12" CMP	15"
305	no existing pipe	15"
306	Two 15" CMPs	15"
307	12" CMP	15"
308	12" RCP	15"
309	15" CMP	15"
310	8" CMP	15"
311	10" CMP	15"
312	12" CMP	15"
313	no existing pipe	15"
314	no existing pipe	15"
315	12" CMP	15"
316	12" CMP	15"
317	15" CMP	15"



318	15" CMP	15"
319	15" CMP	15"
320	no existing pipe	15"

This scope of work is covered by previous reviews. Categories B-3 and B-9 of the Minor Projects PA still apply.

Feature crossed (if applicable):

City/Township: Jefferson and Center townships

County: Boone County

Information reviewed (please check all that apply):

- ☒ General project location map
 ☒ USGS map
 ☒ Aerial photograph
 ☒ Interim Report
☒ Written description of project area
 ☒ General project area photos
 ☒ Soil survey data
☐ Previously completed historic property reports
 ☒ Previously completed archaeology reports
☒ Bridge Inspection Information
 ☒ SHAARD
 ☒ SHAARD GIS
 ☒ Streetview Imagery

Other (please specify): Indiana Historic Building, Bridges, and Cemeteries Map (IHBBCM); County GIS data (accessed via <http://50.73.115.85/boone/map.phtml>); *Residential Planning and Development in Indiana, 1940-1973*; Bridge Inspection Application System (BIAS); project information provided by RQAW dated 8/24/2021 and on file at INDOT-CRO;

Travis, Sidney

2021 A Phase Ia Archaeological Reconnaissance for the Proposed State Road 32 Improvements Near Lebanon in Boone County, Indiana (INDOT Des Nos. 1800060 And 1900361). Cultural Resource Analysts, Inc. Submitted to RQAW Corporation.

2022 An Addendum to the Phase Ia Archaeological Reconnaissance for the Proposed State Road 32 Improvements Project near Lebanon in Boone County, Indiana (INDOT Des. Nos. 1800060 and 1900361). Cultural Resource Analysts, Inc. Submitted to RQAW Corporation. Report on file at INDOT-CRO.

Please specify all applicable categories and condition(s) (applicable conditions are highlighted):

A-4. Roadway work associated with surface replacement, reconstruction, rehabilitation, or resurfacing projects, including overlays, shoulder treatments, pavement repair, seal coating, pavement grinding, and pavement marking within previously disturbed soils where replacement, repair, or installation of curbs, curb ramps or sidewalks will not be required.

B-3. Construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening under the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

Condition A (Archaeological Resources)

One of the two conditions listed below must be met (*EITHER Condition i or Condition ii must be satisfied*):

- i. Work occurs in previously disturbed soils; OR

- ii. Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE.

Condition B (Above-Ground Resources)

Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource.

- B-9. Installation, replacement, repair, lining, or extension of culverts and other drainage structures under the conditions listed below ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

Condition A (Archaeological Resources)

One of the two conditions listed below must be met (*EITHER Condition i or Condition ii must be satisfied*):

- i. Work occurs in previously disturbed soils; *OR*
- ii. Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE.

Condition B (Above-Ground Resources)

One of the conditions below must be met (*EITHER Condition i or Condition ii must be satisfied*):

- i. Work does not involve installation of a new culvert and other drainage structure, and there are no impacts to unusual features, including but not limited to historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and retaining walls, under one of the following conditions (*Condition a, Condition b, or Condition c must be satisfied*):
 - a. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*
 - b. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*
 - c. The structure exhibits non-modern wood, stone, or brick structures or parts therein and the following conditions are met (*BOTH Condition 1 AND Condition 2 must be met*):
 - 1. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*
 - 2. The structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior's Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.
- ii. Work involves the installation of a new culvert and other drainage structures *AND/OR* there may be impacts to unusual features, including historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and retaining walls, under the following conditions (*BOTH Condition a and Condition b must be satisfied*):

- a. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*
- b. The subject structure exhibits one of the characteristics described below (*Condition 1, Condition 2 or Condition 3 must be satisfied*).
 1. The structure exhibits no wood, stone, or brick structures or parts therein; *OR*
 2. The structure exhibits only modern wood, stone, or brick structures or parts therein; *OR*
 3. The structure exhibits non-modern wood, stone, or brick structures or parts therein but lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. Under this condition, a qualified professional (meeting the Secretary of Interior's Professional Qualification standards [48 Federal Register (FR) 44716]) must prepare an analysis and justification that the structure lacks sufficient integrity and/or a context that suggests it might have engineering or historical significance. This documentation must be reviewed and approved by INDOT Cultural Resources Office.

Are there any commitments associated with this project? If yes, please explain and include in the Additional Comments Section below. yes ☐ no ☒

Does the project result in a de minimis impact to a Section 4(f) protected historic resource? If yes, please explain in the Additional Comments Section below. yes ☐ no ☒

Additional comments:

Above-ground Resources

An INDOT-Cultural Resources Office (CRO) historian who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 first performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) lists for Boone County. No listed resources are present within 0.25 mile of the project areas, a distance that would serve as an adequate area of potential effects (APE) given the scope of the project and the surrounding terrain.

The Indiana Historic Sites and Structures Inventory (IHSSI) and National Register information for Boone County are available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). All sites were reviewed through the IHBBCM, which contains the most recently updated SHAARD information. The following IHSSI resources are recorded within 0.25 mile of the project areas:

Center Township

IHSSI #011-269-25020 (School; 2955 W CR 50 N; c. 1920; "contributing")
 IHSSI #011-269-25019 (Farm; SR 32; c. 1850; demolished)
 IHSSI #011-269-25018 (Farm; SR 32; c. 1850; demolished)

Jefferson Township

IHSSI #011-269-20022 (Lane Farm; 4725 SR 32; c. 1890; demolished)
 IHSSI #011-269-20021 (Farm; 5140 W SR 32; c. 1890; demolished)
 IHSSI #011-269-20028 (Farm; SR 75; c. 1890; "contributing")
 IHSSI #011-269-20018 (Jefferson Township School; SR 32; 1926; demolished)
 IHSSI #011-582-20017 (Farm; SR 32; c. 1900; "contributing")
 IHSSI #011-582-20014 (Farm; SR 32; c. 1890/c. 1910; "contributing")

According to the IHSSI rating system, generally properties rated "contributing" do not possess the level of historical or architectural significance necessary to be considered individually National Register eligible, although they would contribute to a historic district. If they retain material integrity, properties rated "notable" might possess the necessary level of significance after further research. Properties rated

“outstanding” usually possess the necessary level of significance to be considered National Register eligible if they retain material integrity. Historic districts identified in the IHSSI are usually considered eligible for the National Register.

Passing Lane 1 (eastbound) from 0.57 mile E of CR 1175 W to 0.10 mile W of CR 1050 W

This portion of the project will occur in a rural area with agricultural fields and scattered residential properties present. Within 0.25 mile of the project area, there are six (6) above-ground properties present, including IHSSI #011-582-20014 (Farm; “contributing”), that will be 50 years old or older by the time of project letting in 2023. The other five (5) properties date to the mid-twentieth century. None of these properties appear to meet the *Residential Planning and Development in Indiana, 1940-1973* requirements to be individually eligible to the National Register.

Passing Lane 2 (westbound) from 0.53 mile E of CR 1000 W to 0.50 mile W of SR 75

This portion of the project will occur in a rural area with agricultural fields and scattered residential properties present. There are six (6) above-ground properties present, including IHSSI #011-582-20017 (Farm; “contributing”), that will be 50 years old or older by the time of project letting in 2023 within 0.25 mile of the project area. One property, a ranch house with agricultural outbuildings, dates to the mid-twentieth century. It does not meet the *Residential Planning and Development in Indiana, 1940-1973* requirements to be individually eligible to the National Register. The other four properties appear to date to the early twentieth century. All of the properties display alterations, including additions and replacement windows and siding. For the purposes of this determination, these four early twentieth-century properties do not retain the material integrity necessary to be considered potentially eligible to the National Register.

Passing Lane 3 (eastbound) from 0.30 mile E of SR 75 to 0.40 mile E of CR 700 W

The western end of this portion of the project is within a small unincorporated community, but the rest of the passing lane will be constructed in a rural area with agricultural fields and scattered residential properties present. Within 0.25 mile of the project, seven (7) properties will be 50 years old or older by project letting in 2023. Three (3) of the properties appear date to the mid-twentieth century, three (3) date approximately to the early twentieth century, and one property appears to date to the late nineteenth/early twentieth century. They mostly consist of residential houses, some with agricultural outbuildings, but one property is a church building and one is a single barn. The church, one of the three mid-century properties, was altered in the late twentieth century or twenty-first century. It does not possess the material integrity to be considered eligible to the National Register. Neither of the other two (2) mid-twentieth century properties appear to meet the *Residential Planning and Development in Indiana, 1940-1973* requirements to be individually eligible to the National Register. The barn appears to date to the early twentieth century, but it is not associated with another property; the barn is not considered individually eligible to the National Register. Both of the other early-twentieth century residential properties and the late nineteenth-century/early twentieth-century residential property are highly altered by additions and replacement windows and siding. In addition, they do not appear to be good examples of a particular style or type. For the purposes of this determination, the properties do not appear to retain the material integrity or possess the cultural significance necessary to be considered eligible to the National Register.

Passing Lane 4 (westbound) from 0.34 mile W of CR 400 W to 0.08 mile W of CR 325 W

This portion of the project will occur in a rural area with agricultural fields and scattered residential properties present. There eight (8) above-ground properties that will be 50 years old or older by the time of project letting in 2023. Three (3) properties date to the mid-twentieth century, four (4) properties date to the early twentieth century, and one property dates to the late nineteenth century. All of the properties are residential houses and most also have associated agricultural outbuildings present. The three mid-twentieth-century properties do not appear to meet the *Residential Planning and Development in Indiana, 1940-1973* requirements to be individually eligible to the National Register. All of these properties have been highly altered with large additions and replacement windows and siding. In addition, they do not appear to be good examples of a particular style or type. There is no evidence that any of the early

twentieth-century properties or the late nineteenth-century property possess the material integrity and/or cultural significance necessary to be considered eligible to the National Register for the purposes of this determination.

The CV 032-006-53.38 structure is a four-sided reinforced concrete box culvert constructed in 1946. Based on an examination of BIAS reports and photos provided by RQAW, the structure exhibits no wood, stone, or brick structures or parts therein. In addition, there is no evidence to suggest that it possesses historical or engineering significance.

The other 12 structures consist of corrugated metal pipes and concrete pipes. These culverts do not appear in the Bridge Inspection Application System (BIAS) since they are functionally classified as pipes due to their small size of less than four feet in diameter. Based on an examination of photos and descriptions of the structures provided by RQAW, the structures exhibit no wood, stone, or brick structures or parts therein. In addition, there is no evidence to suggest that they possess historical or engineering significance.

Based on the available information, as summarized above, no above-ground concerns exist as long as the project scope does not change.

Archaeological Resources

An INDOT Cultural Resources Office (CRO) archaeologist, who met the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61, reviewed and concurred with the archaeological investigation submitted by CRA, Inc. (Travis 2021). The archaeological records review revealed that there were no previously recorded archaeological sites and only one previously conducted archaeological investigation within the survey area.

The archaeological reconnaissance documented nine previously unrecorded archaeological sites. Two sites (12Bo596 and 12Bo599) are low density historic artifact scatters. Three sites (12Bo597, 12Bo598, and 12Bo600) were multicomponent and comprised of historic artifact scatters and prehistoric isolated finds. Sites 12Bo601 and 12Bo602 are prehistoric isolated finds. Sites 12Bo603 and 12Bo604 are low density lithic scatters that have no identifiable components associated with them. The portions of all nine sites (12Bo596–12Bo604) investigated did not demonstrate the ability to provide important information to the history or prehistory of the area, and no further archaeological work is recommended within the survey area.

***4/26/22 UPDATE:** An addendum Phase Ia survey was conducted to cover additional areas of proposed R/W that were added to the project following the original Phase Ia survey. Twenty small areas totaling approximately 0.85 ac were investigated through a combination of systematic shovel probing (n=28), pedestrian survey, and visual inspection of previously disturbed areas. The location of site 12Bo602 was revisited and no evidence of the site was observed. No archaeological sites were recorded as a result of the survey, and no additional investigation is recommended (Travis 2022).

**** 10/27/22 UPDATE:** The additional pipe locations are within the previously investigated areas (Travis 2021, 2022). Structure No. 307 is located in the ditch adjacent to site 12BO604, which was previously found to be ineligible for the National Register (Travis 2021), and its replacement is unlikely to impact the site. According to SHAARD, DHPA concurred on June 12, 2022, that no additional investigation within the surveyed portion of the site is necessary.

Therefore, there are no archaeological concerns as long as the project scope does not change.

Accidental Discovery: If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, construction within 100 feet of the find will be stopped and the INDOT Cultural Resources Office and the Division of Historic Preservation and Archaeology will be notified immediately.

INDOT Cultural Resources staff reviewer(s): Kelyn Alexander, David Moffatt (2021), Matt Coon (2022)

****Be sure to attach this form to the National Environmental Policy Act documentation for this project. Also, the NEPA documentation shall reference and include the description of the specific stipulation in the PA that qualifies the project as exempt from further Section 106 review.*

A PHASE IA ARCHAEOLOGICAL RECONNAISSANCE
FOR THE PROPOSED STATE ROAD 32 IMPROVEMENTS
NEAR LEBANON IN
BOONE COUNTY, INDIANA
(INDOT DES NOS. 1800060 AND 1900361)



by
Sidney Travis, M.A.

Prepared for

RQAW Corporation



Prepared by



Kentucky | West Virginia | Wyoming
Indiana | Louisiana | Tennessee | Virginia

**A PHASE IA ARCHAEOLOGICAL RECONNAISSANCE
FOR THE PROPOSED STATE ROAD 32 IMPROVEMENTS
NEAR LEBANON IN
BOONE COUNTY, INDIANA
(INDOT DES NOS. 1800060 AND 1900361)**

By

Sidney Travis, M.A.
with contributions by Aaron Harth and Andrew Martin

Prepared for

Kyle Boot
RQAW Corporation
3770 North Street, Suite 110
Phone: (317) 588-1762
Email: kboot@rqaw.com

Prepared by

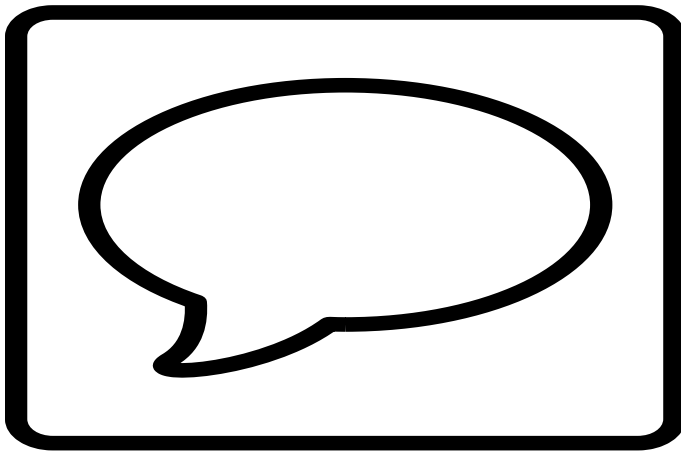
Cultural Resource Analysts, Inc.
201 NW 4th Street, Suite 204
Evansville, Indiana 47708
E-mail: amartin@crai-ky.com
Phone: (812) 253-3009
Fax: (812) 253-3010
CRA Project No.: I20R007



Andrew V. Martin, RPA 61710
Principal Investigator

October 14, 2021

Lead Agency: Indiana Department of Transportation
INDOT DES. Nos.: 1800060 and 1900361
Indiana State Museum Accession No.: 71.19.1814



VI. CONCLUSIONS AND RECOMMENDATIONS

Between June 7 and 10 2021, CRA Inc., personnel conducted a phase Ia archaeological reconnaissance survey for a proposed roadway improvement project along State Road 32 in Boone County, Indiana (INDOT Des. Nos. 1800060 and 1900361). The survey was conducted at the request of RQAW Corporation. The survey area encompassed approximately 42.5 ha (105.0 acres). Survey methods consisted of screened shovel testing, visual inspection of areas with obvious disturbance, and pedestrian survey in agricultural fields.

Prior to conducting this survey, an archaeological records review was completed using the Indiana DHPA's SHAARD. The records review revealed that there were no previously recorded archaeological sites and one previously conducted archaeological investigation within the survey area. The previous investigation was reinvestigated as part of the current survey.

The current survey located nine previously unrecorded archaeological sites (12Bo596–12Bo604) (Table 5). Two sites (12Bo596 and 12Bo599) are low density historic artifact scatters likely associated with non-extant mapped structures. Three sites (12Bo597, 12Bo598, and 12Bo600) were multicomponent comprised of historic artifact scatters associated with non-extant mapped structures and prehistoric isolated finds. The

prehistoric isolates associated with Sites 12Bo597 and 12Bo598 are non-diagnostic flakes. The prehistoric isolate at Site 12Bo600 is a biface dating to the terminal Late Archaic period. Sites 12Bo601 and 12Bo602 are prehistoric isolated finds. Site 12Bo601 is a biface dating to the terminal Late Archaic, while Site 12Bo602 is a non-diagnostic flake. Sites 12Bo603 and 12Bo604 are low density lithic scatters that have no identifiable components associated with them. There is a high likelihood that all nine sites extend outside of the survey area, thus their NRHP eligibilities could not be fully assessed. However, the portion of all nine sites (12Bo596–12Bo604) investigated did not demonstrate the ability to provide important information to the history or prehistory of the area, and no further archaeological work is recommended at the sites within the survey area.

There also were two cemeteries identified within 30.48 m of the survey area. The Dover Cemetery was established in 1878 and the Pleasant View Cemetery was established in 1836. Current proposed construction plans limit ground disturbances by both cemeteries to the ROW for regrading purposes. However, the exact regrading limits are not currently available, thus cemetery development plans may be necessary.

Note that a principal investigator or field archaeologist cannot grant or withhold clearance to a project. Although the decision to grant or withhold clearance is reached, at least in part, on the recommendations made by the field investigator, clearance may be obtained only through an administrative decision made by the lead agency in consultation with the State Historic Preservation Officer (Indiana DHPA). This decision is made, in part, based on the recommendations made by the field investigator.




INDIANA ARCHAEOLOGICAL SHORT REPORT

State Form 54566 (R2 / 11-20)

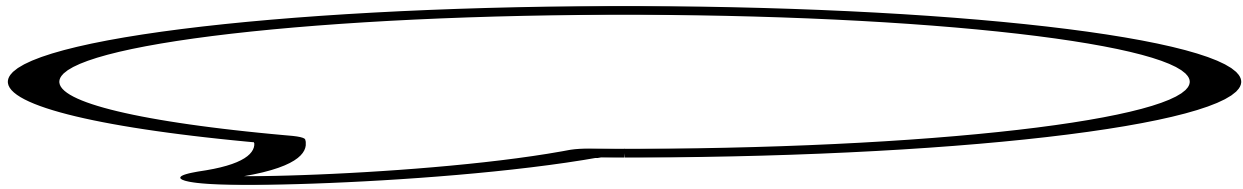
INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF HISTORIC PRESERVATION AND ARCHAEOLOGY
402 West Washington Street, Room W274
Indianapolis, Indiana 46204-2739
Telephone Number: (317) 232-1646
Fax Number: (317) 232-0693
E-mail: dhpa@dnr.IN.gov

Where applicable, the use of this form is recommended but not required by the Division of Historic Preservation and Archaeology (DHPA).

Name(s) of author(s) Sidney Travis, MA		Date (month, day, year) June 9, 2022
Title of project An Addendum to the Phase Ia Archaeological Reconnaissance for the Proposed State Road 32 Improvements Project near Lebanon in Boone County, Indiana (INDOT Des. Nos. 1800060 and 1900361)		
This document is being used to report on the results of: <input type="checkbox"/> Records check only <input type="checkbox"/> Records check and Phase Ia archaeological reconnaissance <input checked="" type="checkbox"/> An addendum to a previous archaeological report. <i>For an addendum, provide the following information.</i>		
Name(s) of author(s) of previous report Sidney Travis		
Title of previous report A Phase Ia Archaeological Reconnaissance for the Proposed State Road 32 Improvements Project near Lebanon in Boone County, Indiana (INDOT Des. Nos. 1800060 and 1900361)		
Date of previous report (month, day, year) 10/14/2021		DHPA number N/A

PROJECT OVERVIEW			
Description of project The Indiana Department of Transportation (INDOT) is proposing to conduct multiple improvements to State Road (SR) 32 west of Lebanon in Boone County, Indiana (Figures 1 and 2). The initial survey area for the added travel lanes and HMA overlay project was conducted in 2020 (Travis 2021). Since the original survey, additional areas of proposed right-of-way (ROW) have been added, and this addendum survey was conducted to cover areas that have not been previously investigated. The addendum survey area encompasses approximately 0.34 ha (0.85 acres) of agricultural fields, residential lawns, and ROW (Figure 3).			
INDOT designation number(s) 1800060 and 1900361	Project number CRA Project No. I220109; CRA Publication Series No. 22-113	DHPA number N/A	DHPA plan number N/A
Prepared for: (Company / Institution / Agency) RQAW Corporation			
Name of contact Kyle Boot			
Address (number and street, city, state, and ZIP code) 8770 North Street, Suite 110, Fishers, Indiana 46038			
Telephone number (317) 588-1762		E-mail address kboot@rqaw.com	
Name of principal investigator Lisa Kelley			
Name of company / institution Cultural Resource Analysts, Inc.			
Address (number and street, city, state, and ZIP code) 201 NW Fourth Street, Suite 204, Evansville, Indiana 47708			
Telephone number (812) 253-3009		E-mail address amartin@crai-ky.com	
Signature of principal investigator (Required) 		Date (month, day, year) June 9, 2022	

PROJECT LOCATION						
County Boone		USGS 7.5' series topographic quadrangle Shannondale and Hazelrigg			Civil township Center and Jefferson	
Legal Location						
Grid alignment NW						
1/4	1/4	1/4	1/4	Section	Township	Range



RECOMMENDATIONS

Records check *(Check all that apply.)*

- ☐ No archaeological investigation is recommended before the project is allowed to proceed because the records check has determined that the project area does not have the potential to contain archaeological resources.
- ☐ A Phase Ia archaeological reconnaissance is recommended.
- ☐ A cemetery development plan may be required under Indiana Code 14-21-1-26.5 because project ground disturbance will be within 100 feet of a cemetery.

Phase Ia archaeological reconnaissance *(Check all that apply.)*

- ☒ It is recommended that the project be allowed to proceed as planned because the Phase Ia archaeological reconnaissance has located no archaeological sites within the project area and/or previously recorded sites that were investigated warrant no additional investigation.
- ☐ It is recommended that Phase Ic archaeological subsurface reconnaissance be conducted before the project is allowed to proceed. The Phase Ia archaeological reconnaissance has determined that the project area includes landforms which have the potential to contain buried archaeological deposits.

Other recommendations / commitments

The survey did not locate any archaeological materials associated with Site 12Bo602, newly recorded archaeological sites, or the potential for intact buried archaeological deposits. Therefore, it is unlikely that intact archaeological deposits are located within the survey area, and no further archaeological work is recommended.

Pursuant to IC-14-21-1, if any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In that event, please call (317) 232-1646.

REQUIRED ATTACHMENTS

- ☒ Figure showing project location within Indiana
- ☒ USGS topographic map showing the project area *(1:24,000 scale)*
- ☒ Aerial photograph showing the project area, land use and survey methods
- ☒ Photographs of the project area, including, if applicable, photographs documenting disturbances
- ☐ Project plans *(if available)*

Other attachments

Figures 1–9; Tables 1 and 2

References cited *(See short report instructions for required references to be consulted.)*

See attachments.

Comments

No additional comments.

CURATION

Location of project documentation

Survey notes and photographs will be retained at the office of CRA in Evansville, Indiana.

From: Kyle J. Boot
Sent: Wednesday, March 29, 2023 11:24 AM
To: Coon, Matthew
Cc: Branigin, Susan; Harlan Ford; Dylan Sievers; Hannah Kopf; Joe Dabkowski; Alexander, Kelyn
Subject: RE: SR 32 Auxiliary Lanes and Structural Overlay, Des. No. 1800060 & 1900361, Addendum MPPA Category A-4, B-3, and B-9 – additional driveway pipes

Hello Matt,

I want to let you know that we've learned a portion of the proposed scope for the above-referenced project will be removed/not constructed. The fourth (farthest east) passing lane will not be constructed and that area will receive an HMA overlay to match the adjacent HMA overlay scope. Please see the following link for the marked-up MPPA determination form in ProjectWise showing the revisions to the project description. [Minor Projects PA determination form B-3 B-9 1800060 1900361 update 2023-03-29.pdf](#)

Due to the reduction in scope, this information is provided to your office for your records and consistency. This email correspondence and marked-up MPPA determination form will be included in the CE document.

Thank you,
Kyle

Kyle Boot, MSHP
Lead Architectural Historian

RQAW | DCCM
317-588-1762 p | 317-410-0845 c

From: Coon, Matthew <mcoon@indot.IN.gov>
Sent: Tuesday, January 17, 2023 3:15 PM
To: Kyle J. Boot <KBoot@rqaw.com>
Cc: Branigin, Susan <SBranigin@indot.IN.gov>; Harlan Ford <hford@rqaw.com>; Dylan Sievers <dsievers@rqaw.com>; Hannah Kopf <hkopf@rqaw.com>; Joseph Dabkowski <jdabkowski@rqaw.com>; Alexander, Kelyn <KAlexander3@indot.IN.gov>
Subject: RE: SR 32 Auxiliary Lanes and Structural Overlay, Des. No. 1800060 & 1900361, Addendum MPPA Category A-4, B-3, and B-9 – additional driveway pipes

Caution: This e-mail originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Categorical Exclusion

Appendix E

Red Flag and Hazardous Materials



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

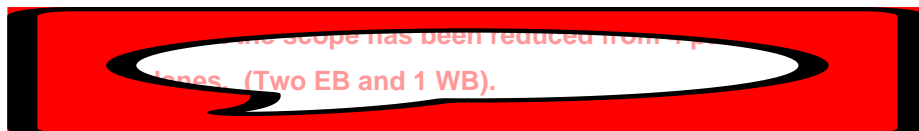
PHONE: (855) 463-6848
(855) INDOT4U

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Date: December 20, 2021

To: Site Assessment & Management (SAM)
Environmental Policy Office - Environmental Services Division (ESD)
Indiana Department of Transportation
100 N Senate Avenue, Room N758-ES
Indianapolis, IN 46204

From: Cameron Fraser
RQAW Corporation
8770 North Street; Suite 110
Fishers, Indiana 46038
cfraser@rqaw.com



Re: RED FLAG INVESTIGATION (Part 1 of 2)
Des. Number 1800060 and 1900361, State Project
Passing Lanes and Minor Structural Overlay
State Road (SR) 32, from 3.69 Miles West of SR 75 to 0.5 Mile West of Interstate (I)-65
Boone County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The Federal Highway Administration (FHWA) and Indiana Department of Transportation (INDOT), Crawfordsville District propose to proceed with a passing lanes and minor structural overlay project on SR 32 from 3.69 miles west of SR 75 to 0.5 mile west of I-65 in Boone County, Indiana. The proposed project will involve a Hot Mix Asphalt (HMA) Minor Structural Overlay on SR 32, from 0.05 mile west of the SR 75 junction to 0.5 mile west of I-65 (approximately 6.62 miles in length). Four (4) passing lanes (auxiliary lanes) will be constructed at various locations along SR 32, approximately 1.00 mile in length each. Passing Lane 1 (eastbound) starts approximately 0.57 mile east of County Road (CR) 1175 West and extends to 0.10 mile west of CR 1050 West. Passing Lane 2 (westbound) starts approximately 0.53 mile east of CR 1000 West and extends to approximately 0.50 mile west of SR 75. Passing Lane 3 (eastbound) starts approximately 0.30 mile east of SR 75 and extends to 0.40 mile east of CR 700 West. Passing Lane 4 (westbound) starts approximately 0.34 mile west of CR 400 West and extends to 0.08 mile east of CR 325 West. Drainage ditch areas will require regrading along the entire length of the project area. New ditches will be established in the passing lane areas. Multiple drainage pipes including two (2) INDOT small structures, Culvert Number (CV) 032-006-53.38 and CV 032-006-57.29, are within the passing lane limits and will be replaced.

This RFI will cover the four (4) passing lane sections, including the two (2) small structure replacements, only. The ditch regarding portion of this project will receive a limited resource evaluation, completed in a separate Limited RFI (Part 2 of 2). The HMA overlay is covered under the Programmatic Categorical Exclusion (PCE) dated February 2, 2012. Therefore, resource evaluation of this work is not necessary.

Bridge Work Included in Project: Yes ☐ No ☒ Structure #(s) _____

If this is a bridge project, is the bridge Historical? Yes ☐ No ☐ , Select ☐ Non-Select ☐

(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

Culvert Work Included in Project: Yes ☒ No ☐ Structure #(s) CV 032-006-53.38 and CV 032-006-57.29

Proposed right of way: Temporary ☒ # Acres To Be Determined (TBD), Permanent ☒ # Acres TBD, Not Applicable ☐

Type of excavation: The passing lanes work will require excavation to a depth of approximately 2 feet below ground surface (bgs). The replacement of the two (2) small structures will require excavation to a depth of 8 feet bgs.

Maintenance of traffic (MOT): The added passing lanes and culvert replacements will include phased construction to limit the impact on commuters.

Work in waterway: Yes ☒ No ☐ Below ordinary high water mark: Yes ☒ No ☐

State Project: ☒ LPA: ☐

Any other factors influencing recommendations: N/A

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities	2*	Recreational Facilities	1
Airports ¹	N/A	Pipelines	3
Cemeteries	2	Railroads	N/A
Hospitals	N/A	Trails	1
Schools	1	Managed Lands	N/A

¹In order to complete the required airport review, a review of public airports within 3.8 miles (20,000 feet) is required.

Explanation:

Religious Facilities: *Two (2) religious facilities, one (1) mapped and one (1) unmapped, are located within the 0.5 mile search radius. The nearest religious facility, Pleasant View Church (unmapped), is located approximately 0.21 mile west of the Passing Lane 3 project area in the southeast quadrant of the SR 32 and SR 75 intersection. No impact is expected.

Recreational Facilities: One (1) recreational facility is located within the 0.5 mile search radius. The recreational facility, Western Boone Junior-Senior High School, is located adjacent to the north of the Passing Lane 3 project area in the northeast quadrant of the SR 32 and SR 75 intersection. Coordination with Western Boone Junior-Senior High School will occur.

Pipelines: Three (3) pipeline segments are located within the 0.5 mile search radius. The nearest pipeline segment is located approximately 0.75 mile east of the Passing Lane 4 project area. No impact is expected.

Cemeteries: Two (2) cemeteries are located within the 0.5 mile search radius. The nearest cemetery, Dover Cemetery, is located approximately 0.05 mile west of the Passing Lane 3 project area, in the northeast quadrant of the SR 32 and SR 75 intersection. A Cemetery Development Plan may be required if this project is within 100 feet of the cemetery. Coordination with INDOT Cultural Resources will occur.

Trails: One (1) trail segment is located within the 0.5 mile search radius. The trail segment, Thorntown south to Jamestown, is located approximately 0.30 mile west of the Passing Lane 3 project area, at the SR 32 and SR 75 intersection. No impact is expected.

Schools: One (1) school is located within the 0.5 mile search radius. The school, Western Boone Junior-Senior High School, is located adjacent to the north of the Passing Lane 3 project area, in the northeast quadrant of the SR 32 and SR 75 intersection. Coordination with Western Boone Junior-Senior High School will occur.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	1	Canal Routes - Historic	N/A
Karst Springs	N/A	NWI - Wetlands	48
Canal Structures – Historic	N/A	Lakes	4
NPS NRI Listed	N/A	Floodplain - DFIRM	8
NWI-Lines	4	Cave Entrance Density	N/A
IDEM 303d Listed Streams and Lakes (Impaired)	N/A	Sinkhole Areas	N/A
Rivers and Streams	28	Sinking-Stream Basins	N/A

If unmapped water features are identified that might impact the project area, direct coordination with INDOT ESD Ecology and Waterway Permitting will occur.

Explanation:

Due to the presence of the two (2) culverts and various drainage pipes, there is a potential for unmapped water features within the project area. Coordination with INDOT ESD Ecology and Waterway Permitting will occur.

National Wetlands Inventory (NWI)-Points: One (1) NWI-point is located within the 0.5 mile search radius. The NWI-point is located approximately 0.28 mile southeast of the Passing Lane 4 project area. No impact is expected.

NWI-Wetlands: Forty-eight (48) NWI-wetland polygons are located within the 0.5 mile search radius. Three (3) NWI-wetland polygons are located adjacent to the Passing Lane project areas; one (1) NWI-wetland polygon is located adjacent to the south of the Passing Lane 1 project area, and two (2) NWI-wetland polygons are located adjacent to the south of the Passing Lane 3 project area. A Waters of the US Report will be prepared and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

Lakes: Four (4) lake polygons are located within the 0.5 mile search radius. The nearest lake polygon is located approximately 0.19 mile north of the Passing Lane 3 project area. No impact is expected.

Floodplain – Digital Flood Insurance Rate Map (DFIRM): Eight (8) floodplain-DFIRM polygons are located within the 0.5 mile search radius. The nearest floodplain-DFIRM polygon is located approximately 0.27 mile east of the Passing Lane 2 Project area. No impact is expected.

NWI-Lines: Four (4) NWI-line segments are located within the 0.5 mile search radius. The nearest NWI-line is located approximately 0.06 mile east of the Passing Lane 3 project area. No impact is expected.

Rivers and Streams: Twenty-eight (28) stream segments are located within the 0.5 mile search radius. Three (3) stream segments are located adjacent to the Passing Lane project areas; One (1) stream segment is located adjacent to the east

of the Passing Lane 1 project area, and two (2) stream segments are located adjacent to the Passing Lane 3 project area (one (1) to the east and one (1) to the west). A Waters of the US Report will be prepared and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	9	Mineral Resources	N/A
Mines – Surface	N/A	Mines – Underground	N/A

Explanation:

Petroleum Wells: Nine (9) petroleum wells are located within the 0.5 mile search radius. One (1) petroleum well (presumed plugged) is located adjacent to the north of the Passing Lane 4 project area. Coordination with Indiana Department of Natural Resources (IDNR) Oil and Gas Division will occur.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	N/A	Manufactured Gas Plant Sites	N/A
RCRA Generator/ TSD	N/A	Open Dump Waste Sites	N/A
RCRA Corrective Action Sites	N/A	Restricted Waste Sites	N/A
State Cleanup Sites	2	Waste Transfer Stations	N/A
Septage Waste Sites	N/A	Tire Waste Sites	N/A
Underground Storage Tank (UST) Sites	6	Confined Feeding Operations (CFO)	N/A
Voluntary Remediation Program	1	Brownfields	N/A
Construction Demolition Waste	N/A	Institutional Controls	1
Solid Waste Landfill	N/A	NPDES Facilities	8
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	1
Leaking Underground Storage Tank (LUST) Sites	5	Notice of Contamination Sites	N/A

Unless otherwise noted, site specific details presented in this section were obtained from documents reviewed on the Indiana Department of Environmental Management (IDEM) Virtual File Cabinet (VFC).

Explanation:

State Cleanup: Two (2) State Cleanup sites are located within the 0.5 mile search radius. The nearest State Cleanup site is located approximately 1.8 miles southeast of the Passing Lane 4 project area. No impact is expected.

UST Sites: Six (6) UST sites are located within the 0.5 mile search radius. The nearest UST site, Dover Marathon, 7995 SR 32 West (AI ID 1951), is incorrectly mapped east of the Passing Lane 3 project area. The site is actually located approximately 0.29 mile west of the Passing Lane 3 project area, in the southeast quadrant of the SR 32 and SR 75 intersection. The station was closed and four (4) USTs were removed in the early 1990's. There is no indication that a release has occurred at this facility. No impact is expected.

Voluntary Remediation Program: One (1) Voluntary Remediation Program site is located within the 0.5 mile search radius. The Voluntary Remediation Program site is located approximately 1.9 miles southeast of the Passing Lane 4 project area. No impact is expected.

LUST Sites: Five (5) LUST sites are located within the 0.5 mile search radius. The nearest LUST site, JD Marathon, 8025 West SR 32 (AI ID 4805), is located approximately 0.30 mile west of the Passing lane 3 project area. Petroleum contamination in the soil and groundwater was discovered during a property transaction in 2006. According to the No Further Action (NFA) Determination issued by IDEM on September 26, 2006, low levels of contamination remains on site at depths ranging from 4 to 6 feet bgs. On June 27, 2019 a suspected release was reported to IDEM. A limited Subsurface Investigation was completed on January 10, 2020. The limited Subsurface Investigation concluded that the extent of subsurface petroleum contamination appears to be minimal and sufficiently delineated. Contamination does not appear to migrate off site. No impact is expected.

Institutional Controls: One (1) Institutional Controls site is located within the 0.5 mile search radius. The Institutional Controls site is located approximately 1.9 miles southeast of the Passing Lane 4 project area. No impact is expected.

National Pollutant Discharge Elimination System (NPDES) Facilities: Eight (8) NPDES facilities are located within the 0.5 mile search radius. The nearest NPDES facility is, Western Boone Junior-Senior High School Track and Renovations, 1205 SR 75 (AI ID 123849), is located adjacent to the north of the Passing Lane 3 project area. The permit is in effect until April 8, 2024. Coordination with Western Boone Junior-Senior High School will occur.

NPDES Pipe Locations: One (1) NPDES pipe is located within the 0.5 mile search radius. The NPDES pipe, Western Boone Junior-Senior High School, is located approximately 0.30 mile north of the Passing Lane 3 project area. Coordination with Western Boone Junior-Senior High School will occur.

ECOLOGICAL INFORMATION SUMMARY

The Boone County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities can be found at the following link: https://www.in.gov/dnr/naturepreserve/files/np_boone.pdf. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did indicate the presence of ETR species within the 0.5 mile search radius. Coordination with the United States Fish and Wildlife Service (USFWS) and IDNR will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a rural area surrounded by farm fields with some residential and commercial properties. The June 11, 2020, inspection report for Culvert 032-006-53.38 and the June 15, 2020, inspection report for Culvert 032-006-57.29 state that no evidence of bats was seen or heard in the culverts. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

RECOMMENDATIONS SECTION

Include recommendations from each section. If there are no recommendations, please indicate N/A:

INFRASTRUCTURE:

Recreational Facilities: One (1) recreational facility, Western Boone Junior-Senior High School, is located adjacent to the north of the Passing Lane 3 project area in the northeast quadrant of the SR 32 and SR 75 intersection. Coordination with Western Boone Junior-Senior High School will occur.

Cemeteries: One (1) cemetery, Dover Cemetery, is located approximately 0.05 mile west of the Passing Lane 3 project area, in the northeast quadrant of the SR 32 and SR 75 intersection. A Cemetery Development Plan may be required if this project is within 100 feet of the cemetery. Coordination with INDOT Cultural Resources will occur.

Schools: One (1) school, Western Boone Junior-Senior High School, is located adjacent to the north of the Passing Lane 3 project area, in the northeast quadrant of the SR 32 and SR 75 intersection. Coordination with Western Boone Junior-Senior High School will occur.

WATER RESOURCES: The presence of the following water resources will require the preparation of a Waters of the US Report and coordination with INDOT ESD Ecology and Waterway Permitting.

- Three (3) NWI-Wetland polygons are located adjacent to the project area; One (1) NWI-Wetland polygon is located adjacent to the south of the Passing Lane 1 project area, and two (2) NWI-Wetland polygons are located adjacent to the south of the Passing Lane 3 project area.
- Three (3) stream segments are located adjacent to the Passing Lane project areas; One (1) stream segment is located adjacent to the east of the Passing Lane 1 project area, and two (2) stream segments are located adjacent to the Passing Lane 3 project area (one (1) to the east and one (1) to the west).
- Due to the presence of the two (2) culverts and various drainage pipes, there is a potential for unmapped water features within the project area (coordination only).

MINING/MINERAL EXPLORATION:

Petroleum Wells: One (1) petroleum well (presumed plugged) is located adjacent to the north of the Passing Lane 4 project area. Coordination with Indiana Department of Natural Resources (IDNR) Oil and Gas Division will occur.

HAZMAT CONCERNS:

NPDES Facility: Western Boone Junior-Senior High School Track and Renovations, 1205 SR 75 (AI ID 123849), is located adjacent to the north of the Passing Lane 3 project area. The permit is in effect until April 8, 2024. Coordination with Western Boone Junior-Senior High School will occur.

NPDES Pipe Locations: Western Boone Junior-Senior High School is located approximately 0.30 mile north of the Passing Lane 3 project area. Coordination with Western Boone Junior-Senior High School will occur.

ECOLOGICAL INFORMATION: Coordination with USFWS and IDNR will occur. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

Nicole Fohey-
Breting

Digitally signed by
Nicole Fohey-Breting
Date: 2021.12.21
04:50:29 -05'00'

INDOT ESD concurrence: _____ (Signature)

Prepared by:



Cameron Fraser
NEPA Specialist
RQAW Corporation

Graphics:

A map for each report section with a 0.5 mile search radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

SITE LOCATION: YES

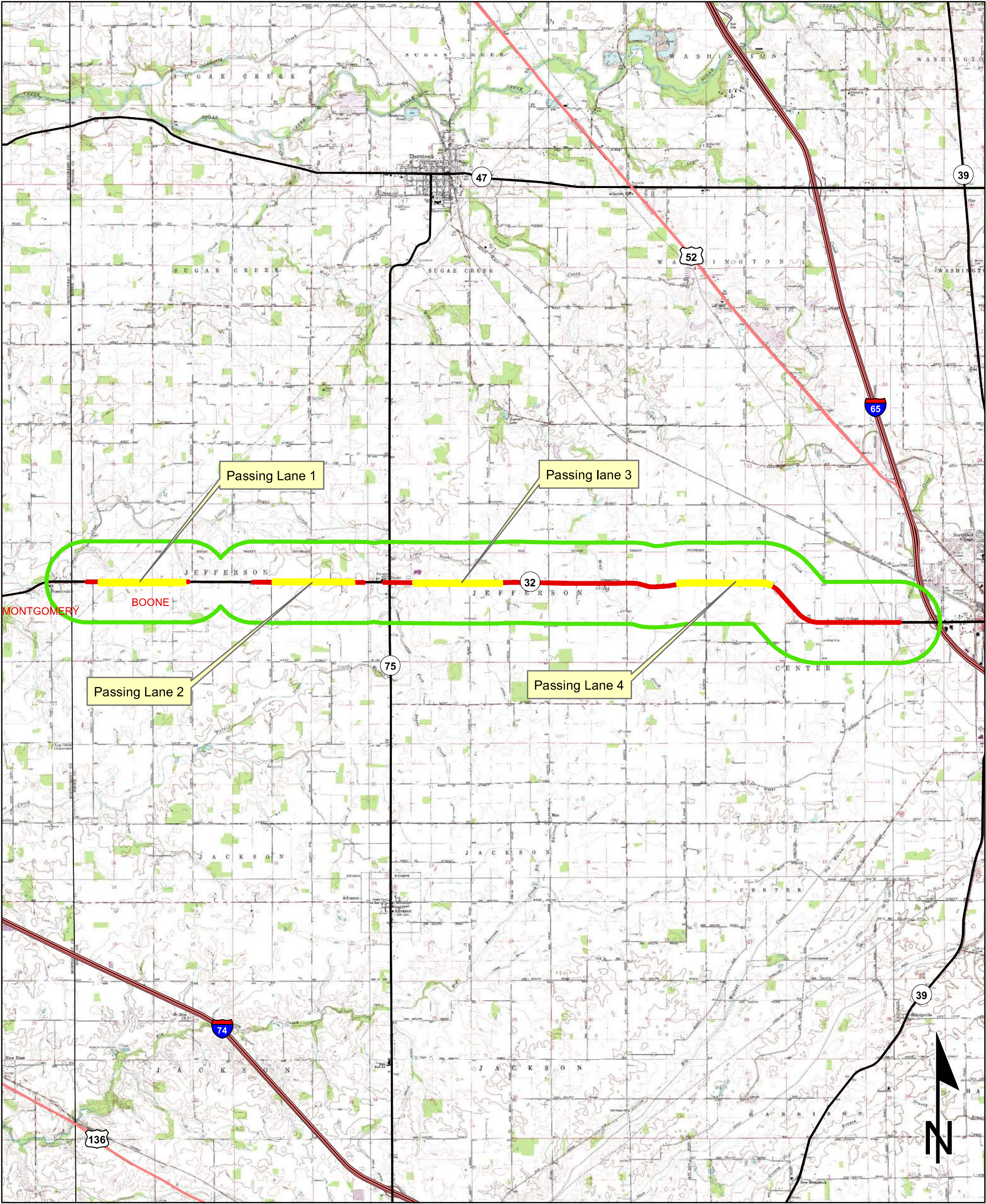
INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: YES

HAZMAT CONCERNS: YES

Red Flag Investigation - Site Location
SR 32, 3.69 Miles West of SR 75 to 0.5 Mile West of I-65
Des. No. 1800060 and 1900361, Passing Lane and Minor Structure Overlay
Boone County, Indiana



Sources: 1.5 0.75 0 1.5 Miles
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

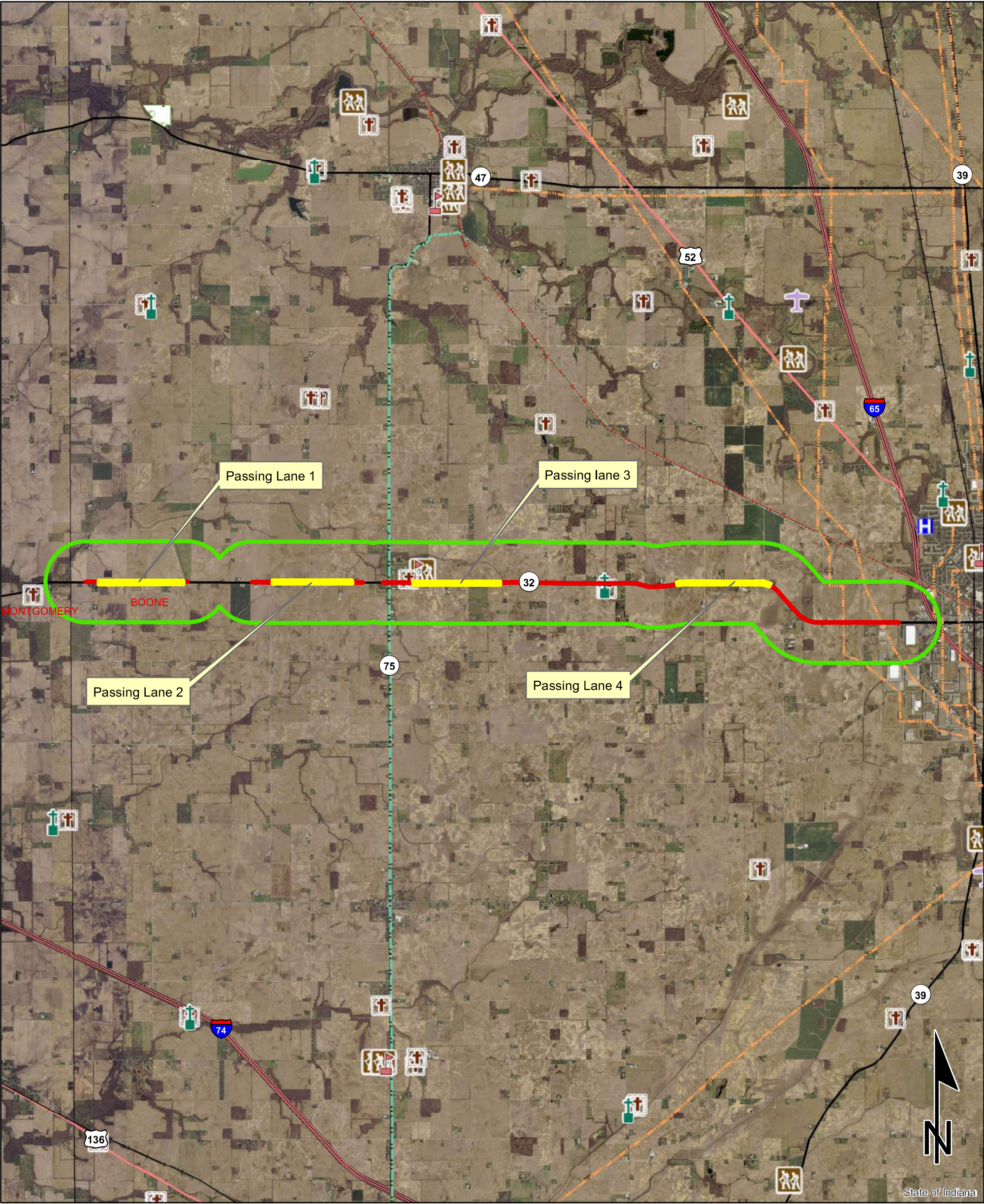
LEBANON, HAZELRIGG, &
SHANNONDALE
QUADRANGLES
INDIANA
7.5 MINUTE SERIES

Red Flag Investigation - Infrastructure

SR 32, 3.69 Miles West of SR 75 to 0.5 Mile West of I-65

Des. No. 1800060 and 1900361, Passing Lane and Minor Structure Overlay

Boone County, Indiana



Sources:

Non Orthophotography

Data - Obtained from the State of Indiana Geographical Information Office Library

Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)

Map Projection: UTM Zone 16 N Map Datum: NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

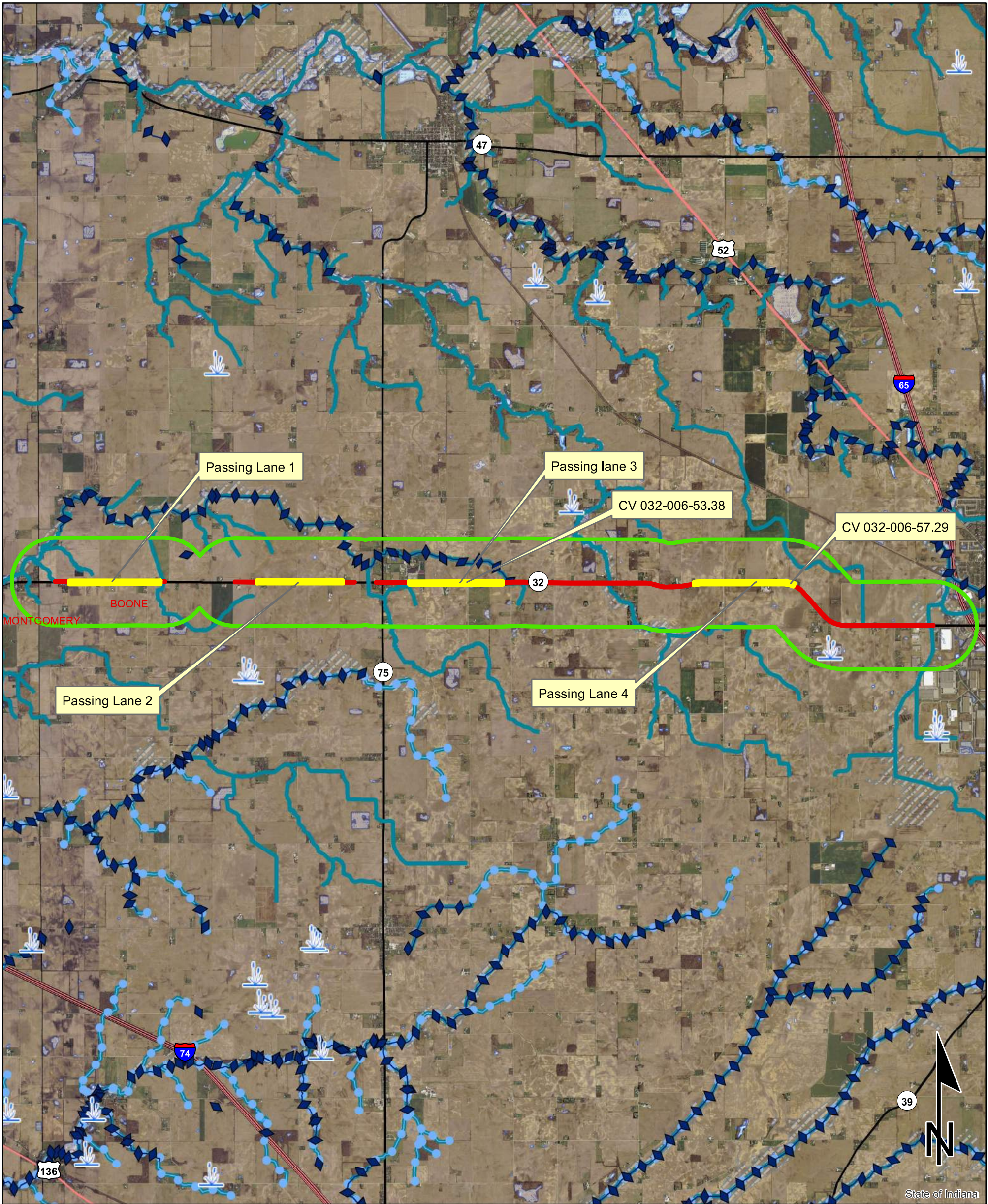
1.5 0.75 0 1.5 Miles

	Religious Facility		Recreation Facility		Project Area
	Airport		Pipeline		Half Mile Radius
	Cemeteries		Railroad		Toll
	Hospital		Trails		Interstate
	School		Managed Lands		State Route
			County Boundary		US Route
					Local Road

Red Flag Investigation - Water Resources

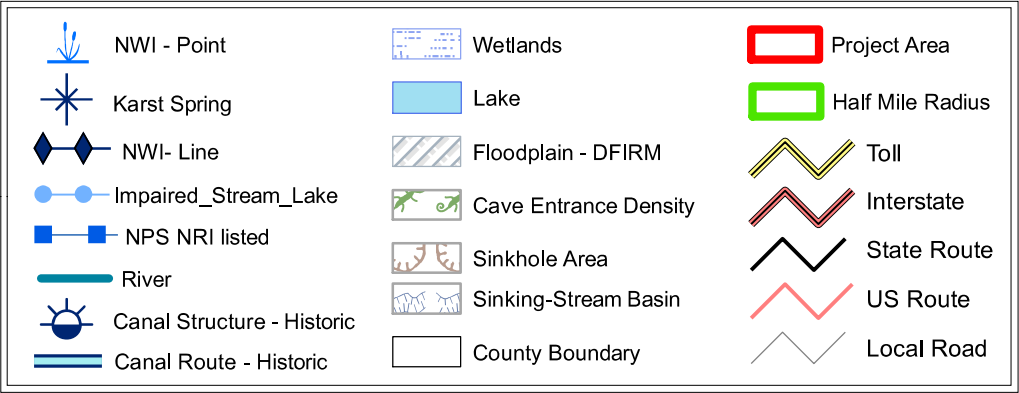
SR 32, 3.69 Miles West of SR 75 to 0.5 Mile West of I-65

Des. No. 1800060 and 1900361, Passing Lane and Minor Structure Overlay
Boone County, Indiana

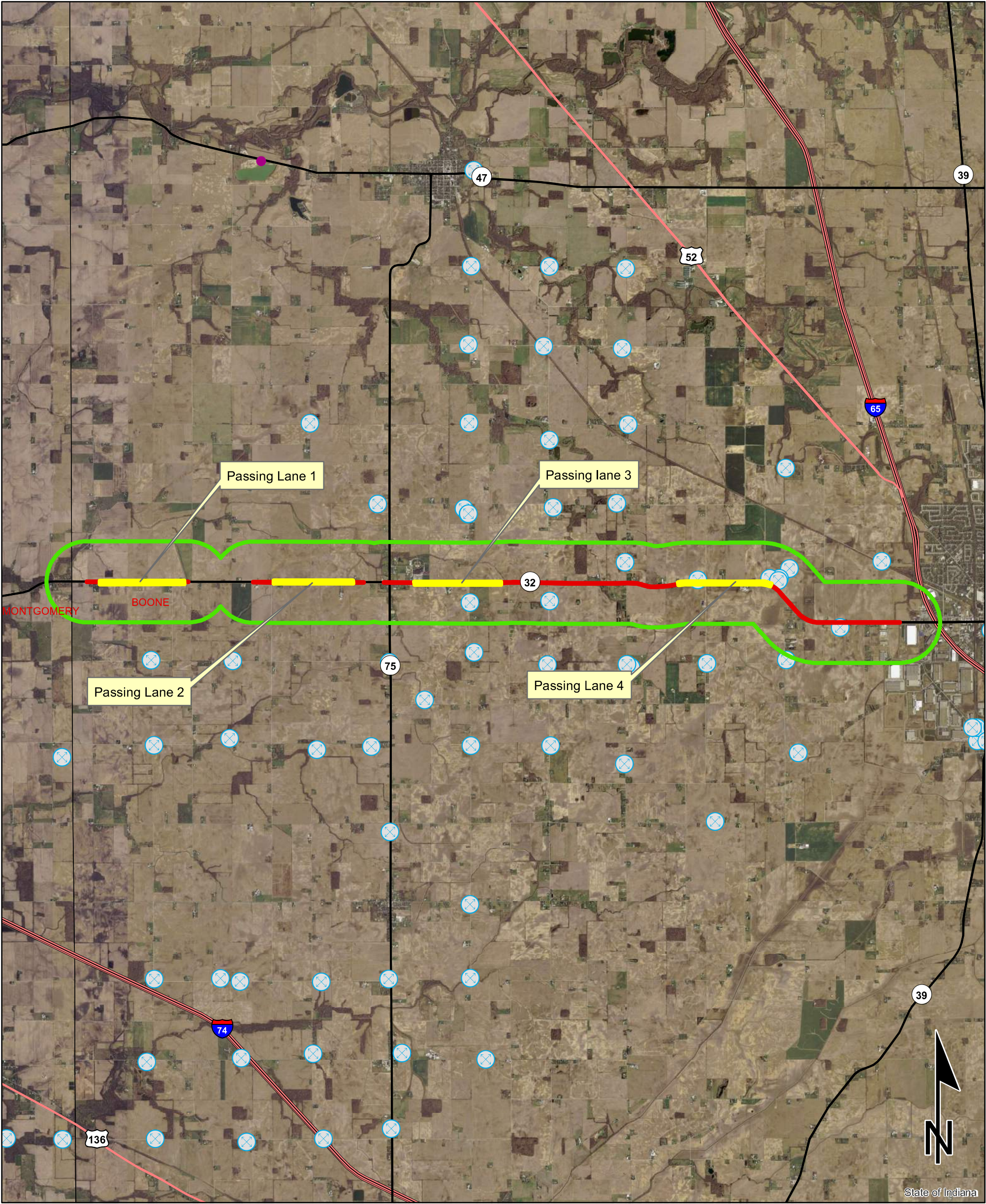


Sources:
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.



Red Flag Investigation - Mining and Mineral Exploration
SR 32, 3.69 Miles West of SR 75 to 0.5 Mile West of I-65
Des. No. 1800060 and 1900361, Passing Lane and Minor Structure Overlay
Boone County, Indiana



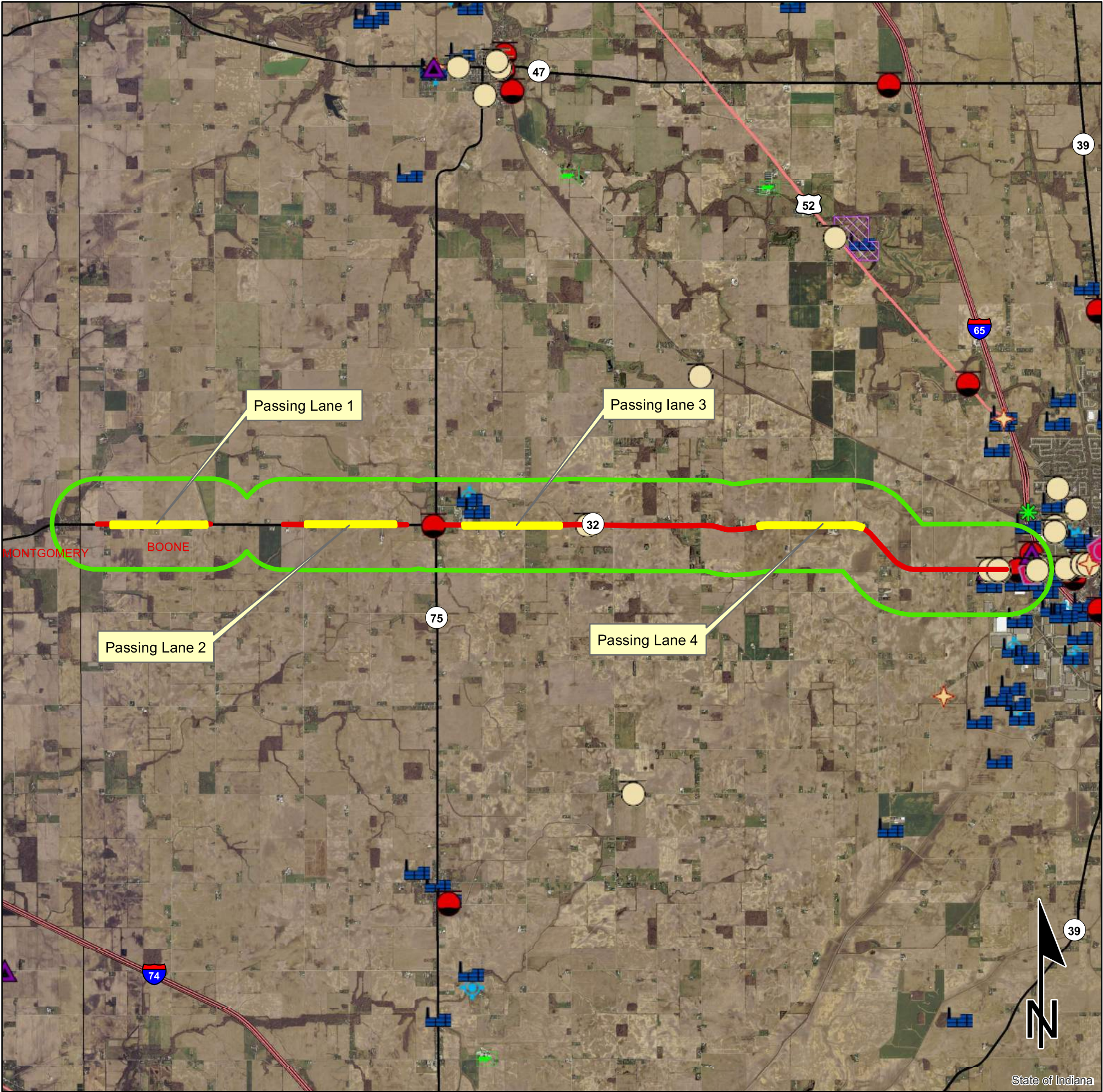
Sources:
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

1.5 0.75 0 1.5 Miles

Oil and Gas Wells	County Boundary	Toll
Mineral Resources	Project Area	Interstate
Mine - Surface	Half Mile Radius	State Route
Mine - Underground		US Route
		Local Road

Red Flag Investigation - Hazardous Material Concerns
SR 32, 3.69 Miles West of SR 75 to 0.5 Mile West of I-65
Des. No. 1800060 and 1900361, Passing Lane and Minor Structure Overlay
Boone County, Indiana



	Brownfield		RCRA Generator/TSD		Institutional Controls
	RCRA Corrective Action Sites		Restricted Waste Site		County Boundary
	Confined Feeding Operation		Septage Waste Site		Project Area
	Notice_Of_Contamination		Solid Waste Landfill		Half Mile Radius
	Construction/Demolition Site		State Cleanup Site		Toll
	Infectious/Medical Waste Site		Superfund		Interstate
	Leaking Underground Storage Tank		Tire Waste Site		State Route
	Manufactured Gas Plant		Underground Storage Tank		US Route
	NPDES Facilites		Voluntary Remediation Program		Local Road
	NPDES Pipe Locations		Waste Transfer Station		
	Open Dump Waste Site				



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

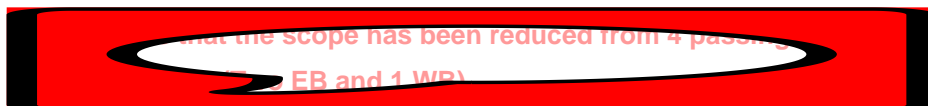
PHONE: (855) 463-6848
(855) INDOT4U

Eric Holcomb, Governor
Joe McGuinness, Commissioner

Date: December 20, 2021

To: Site Assessment & Management (SAM)
Environmental Policy Office - Environmental Services Division (ESD)
Indiana Department of Transportation
100 N Senate Avenue, Room N758-ES
Indianapolis, IN 46204

From: Cameron Fraser
RQAW Corporation
8770 North Street; Suite 110
Fishers, Indiana 46038
cfraser@rqaw.com



Re: LIMITED RED FLAG INVESTIGATION (Part 2 of 2)
Des. Number 1800060 and 1900361, State Project
Passing Lanes and Minor Structural Overlay
State Road (SR) 32, from 3.69 mile West of SR 75 to 0.5 mile West of Interstate (I)-65
Boone County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The Federal Highway Administration (FHWA) and Indiana Department of Transportation (INDOT), Crawfordsville District propose to proceed with a passing lanes and minor structural overlay project on SR 32 from 3.69 miles west of SR 75 to 0.5 mile west of I-65 in Boone County, Indiana. The proposed project will involve a Hot Mix Asphalt (HMA) Minor Structural Overlay (from 0.05 mile west of the SR 75 junction to 0.5 mile west of I-65), the construction of four (4) passing lane locations, replacement of drainage pipes within the four (4) passing lane areas, and drainage ditch regrading. Refer to the RFI Part 1 of 2 for full project description. Coordination with INDOT SAM occurred on May 7, 2021, and it was determined that a limited RFI should be prepared for the drainage ditch work portion of this project.

This Limited RFI will cover the drainage ditch regrading work only. The four (4) passing lane sections of this project and the small structure replacements will receive a full resource evaluation, completed in a separate RFI (Part 1 of 2). The HMA overlay is covered under the Programmatic Categorical Exclusion (PCE) dated February 2, 2012. Therefore, resource evaluation of this work is not necessary.

Bridge Work Included in Project: Yes ☐ No ☒ Structure #(s) _____

If this is a bridge project, is the bridge Historical? Yes ☐ No ☐ , Select ☐ Non-Select ☐

(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

Culvert Work Included in Project: Yes ☒ No ☐ Structure #(s) _____

Proposed right of way: Temporary ☒ # Acres To Be Determined (TBD), Permanent ☒ # Acres TBD, Not Applicable ☐

1 | Page

Red Flag Investigation, DES # 1800060 and 1900361

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Type of excavation: The depth of excavation required for the ditch regrading work will not exceed 1 foot bgs.
Maintenance of traffic (MOT): A flagging operation will be used to complete the minor structural overlay and ditch regrading.

Work in waterway: Yes ☐ No ☒ Below ordinary high water mark: Yes ☐ No ☐

State Project: ☒ LPA: ☐

Any other factors influencing recommendations: Due to the nature of the project (work within the drainage ditch), coordination with INDOT ESD Ecology and Waterway Permitting will occur.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	N/A	Manufactured Gas Plant Sites	N/A
RCRA Generator/ TSD	N/A	Open Dump Waste Sites	N/A
RCRA Corrective Action Sites	N/A	Restricted Waste Sites	N/A
State Cleanup Sites	2	Waste Transfer Stations	N/A
Septage Waste Sites	N/A	Tire Waste Sites	N/A
Underground Storage Tank (UST) Sites	6	Confined Feeding Operations (CFO)	N/A
Voluntary Remediation Program	1	Brownfields	N/A
Construction Demolition Waste	N/A	Institutional Controls	1
Solid Waste Landfill	N/A	NPDES Facilities	8
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	1
Leaking Underground Storage Tank (LUST) Sites	5	Notice of Contamination Sites	N/A

Unless otherwise noted, site specific details presented in this section were obtained from documents reviewed on the Indiana Department of Environmental Management (IDEM) Virtual File Cabinet (VFC).

Explanation: This Limited RFI is being generated due to the proposed excavation activities within the drainage ditches:

State Cleanup Sites: Two (2) State Cleanup sites are located within the 0.5 mile search radius. The nearest state cleanup site, Lees INN, 1245 West SR 32 (AI ID 7003), is incorrectly mapped within the eastern portion of the project area. The site is actually located approximately 0.24 mile east of the project area. This site is also listed as a Voluntary Remediation Site with institutional controls. Refer to the Voluntary Remediation Program and institutional Controls sections below for more details.

UST Sites: Six (6) UST sites are located within the 0.5 mile search radius. Three (3) UST Sites are located within the vicinity of the project area.

Dover Marathon, 7995 SR 32 West (AI ID 1951), is incorrectly mapped within the project area, approximately 1.6 mile east of the SR 32 and SR 75 intersection. The site is actually located adjacent to the project area, in the southeast quadrant of the SR 32 and SR 75 intersection. The station was closed, and four (4) USTs were removed in the early 1990's. There is no closure documentation available. Based on the proposed depth of excavation (i.e. 1 ft-bgs), no impact is expected; however, if the depth of excavation should change, coordination with INDOT SAM will occur.

Shell Oil Lebanon Westside Station, 1230 West SR 32 (AI ID 2543), is incorrectly mapped within the east portion of the project area. The site is actually located approximately 0.30 mile east of the project area. IDEM issued a UST Inspection on December 1, 2020, and the facility was found to be out of compliance with equipment, operating, and maintenance requirements set forth in Indiana's UST Rule 329 IAC 9. IDEM issued a Return to Compliance Letter for the site on January 28, 2021. No impact is expected.

Parker Hannifin Corporation, 1515 West South Street (AI ID 1473), is incorrectly mapped within the east portion of the project area. The site is actually located outside of the 0.5 mile search radius to the east. No impact is expected.

Siess Duff Company Incorporated, 1524 West South Street (AI ID 2547), is incorrectly mapped within the east portion of the project area. The site is actually located outside of the 0.5 mile search radius to the east. No impact is expected.

Voluntary Remediation Program Sites: One (1) Voluntary Remediation Program site is located within the 0.5 mile search radius. Lees INN, 1245 West State Road 32 (AI ID 7003), is located approximately 0.24 mile east of the project area. IDEM issued a Certificate of Completion letter for the site on February 7, 2011. Low levels of soil and groundwater contamination remain on the site but does not extend to the project area. No impact is expected.

LUST Sites: Five (5) LUST sites are located within the 0.5 mile search radius. Two (2) LUST sites are located within the vicinity of the project area.

JD Marathon, 8025 West SR 32 (AI ID 4805) is located adjacent to the south of the project area project area, in the southwest quadrant of the SR 32 and SR 75 intersection. Petroleum contamination in the soil and groundwater was discovered during a property transaction in 2006. According to the No Further Action (NFA) Determination issued by IDEM on September 26, 2006, low levels of contamination remains on site at depths ranging from 4 to 6 feet bgs. On June 27, 2019 a suspected release was reported to IDEM. A limited Subsurface Investigation was completed on January 10, 2020. The limited Subsurface Investigation concluded that the extent of subsurface petroleum contamination appears to be minimal and sufficiently delineated. Contamination does not appear to migrate off site. No impact is expected.

Beason's Muffler Center, 1325 West South Street (AI ID 5236), is incorrectly mapped approximately 0.10 mile east of the project area. The site is actually located outside of the 0.5 mile search radius to the east. No impact is expected.

Institutional Controls: One (1) Institutional Controls site is located within the 0.5 mile search radius. Lees INN, 1245 West State Road 32 (AI ID 7003), is located approximately 0.24 mile east of the project area. An ERC was filed for record in Boone County on January 14, 2011. No impact is expected.

National Pollutant Discharge Elimination System (NPDES) Facilities: Eight (8) NPDES Facilities are located within the 0.5 mile search radius. One (1) NPDES facility is located within the vicinity of the project area. Western Boone Junior-Senior High School Track and Renovations, 1205 SR 75 (AI ID 123849), is located adjacent to the north of the project area, in the northeast quadrant of the SR 32 and SR 75 intersection. The permit is in effect until April 8, 2024. Coordination with Western Boone Junior-Senior High School will occur.

NPDES Pipe Locations: One (1) NPDES Pipe is located within the 0.5 mile search radius. The NPDES pipe, Western Boone Junior-Senior High School, is located approximately 0.30 mile north of the project area. Coordination with Western Boone Junior-Senior High School will occur.

ECOLOGICAL INFORMATION SUMMARY

The Boone County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities can be found at the following link: https://www.in.gov/dnr/naturepreserve/files/np_boone.pdf. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did indicate the presence of ETR species within the 0.5 mile search radius. Coordination with the United States Fish and Wildlife Service (USFWS) and Indiana Department of Natural Resources (IDNR) will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a rural area surrounded by farm fields with some residential and commercial properties. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

RECOMMENDATIONS SECTION

Include recommendations from each section. If there are no recommendations, please indicate N/A:

Due to the nature of the project (work within the drainage ditch), coordination with INDOT ESD Ecology and Waterway Permitting will occur.

HAZMAT CONCERNS:

UST Sites: Dover Marathon, 7995 SR 32 West (AI ID 1951), is incorrectly mapped within the project area, approximately 1.6 mile east of the SR 32 and SR 75 intersection. The site is actually located adjacent to the project area, in the southeast quadrant of the SR 32 and SR 75 intersection. The station was closed, and four (4) USTs were removed in the early 1990's. There is no closure documentation available. Based on the proposed depth of excavation (i.e. 1 ft-bgs), no impact is expected; however, if the depth of excavation should change, coordination with INDOT SAM will occur.

NPDES Facility: Western Boone Junior-Senior High School Track and Renovations, 1205 SR 75 (AI ID 123849), is located adjacent to the north of the project area, in the northeast quadrant of the SR 32 and SR 75 intersection. The permit is in effect until April 8, 2024. Coordination with Western Boone Junior-Senior High School will occur.

NPDES Pipe Locations: Western Boone Junior-Senior High School is located approximately 0.30 mile north of the project area. Coordination with Western Boone Junior-Senior High School will occur.

ECOLOGICAL INFORMATION: Coordination with USFWS and IDNR will occur. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

Nicole Fohey-
Breting

Digitally signed by
Nicole Fohey-Breting
Date: 2021.12.21
04:53:16 -05'00'

INDOT ESD concurrence: _____ (Signature)

Prepared by:



Cameron Fraser
NEPA Specialist
RQAW Corporation

Graphics:

A map for each report section with a 0.5 mile search radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

SITE LOCATION: YES

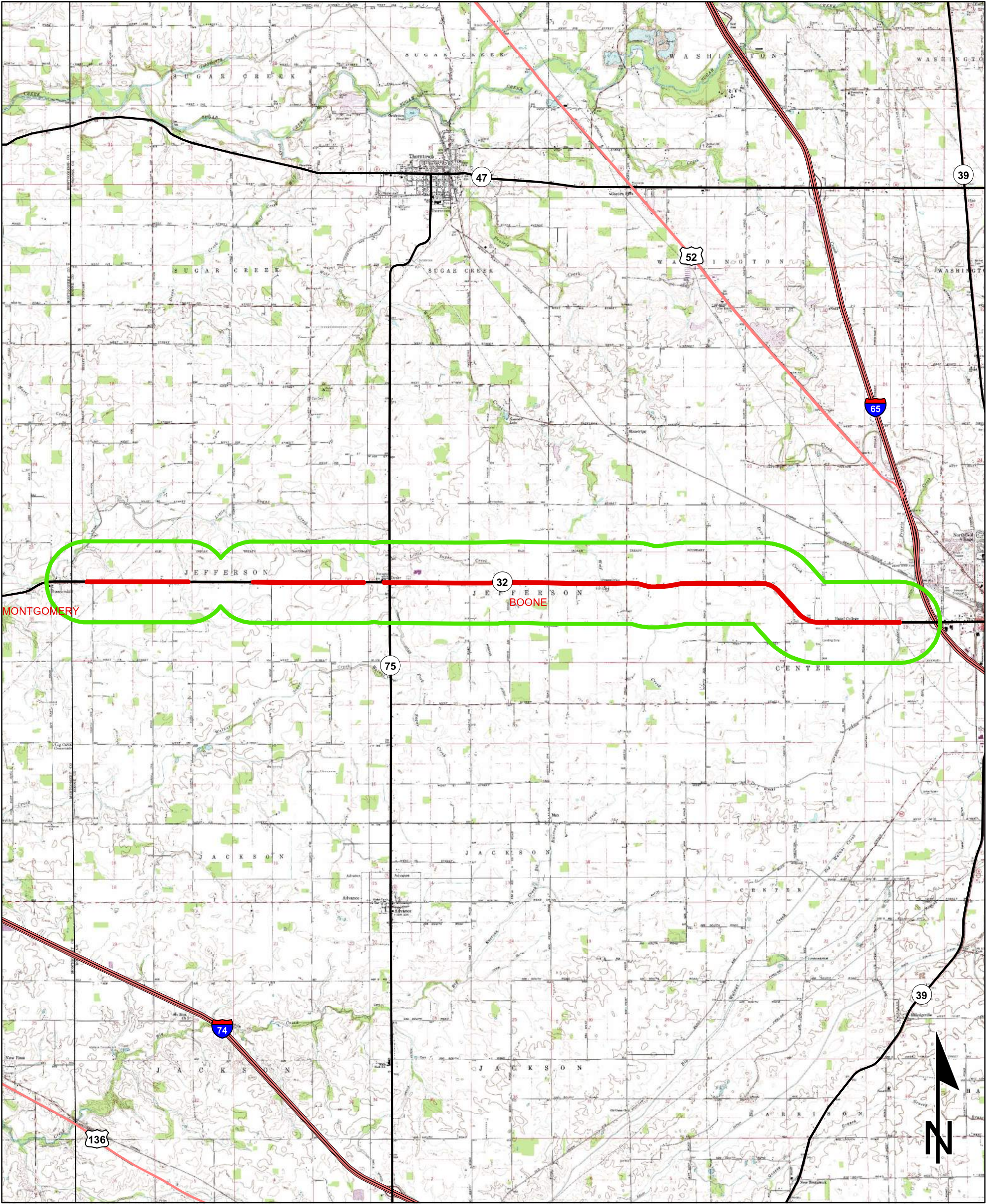
INFRASTRUCTURE: N/A

WATER RESOURCES: N/A

MINING/MINERAL EXPLORATION: N/A

HAZMAT CONCERNS: YES

Limited Red Flag Investigation - Site Location
SR 32, 3.69 Miles West of SR 75 to 0.5 Mile West of I-65
Des. No. 1800060 and 1900361, Passing Lane and Minor Structure Overlay
Boone County, Indiana



Sources: 1.5 0.75 0 1.5 Miles
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83
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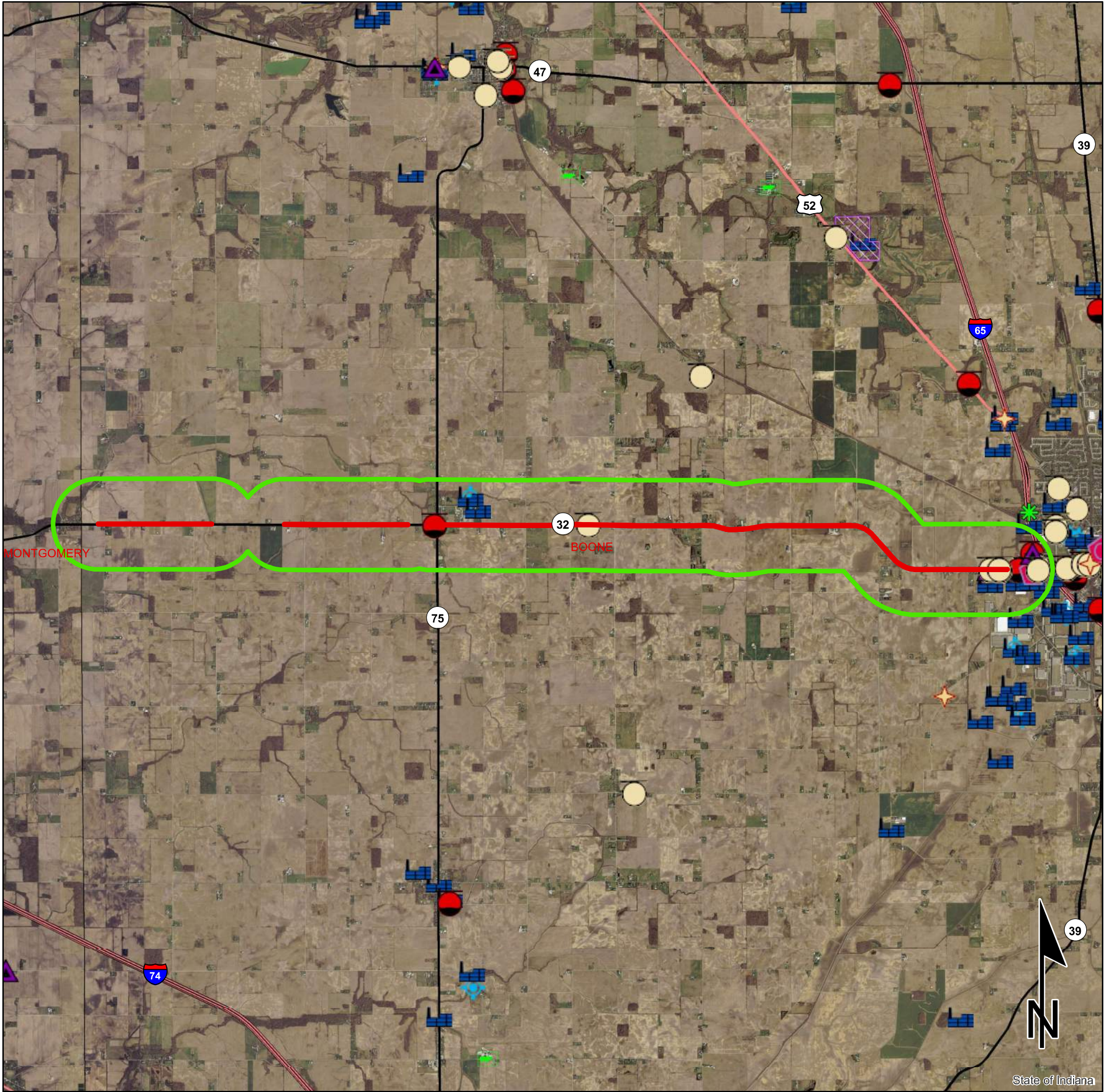
LEBANON, HAZELRIGG, &
SHANNONDALE
QUADRANGLES
INDIANA
7.5 MINUTE SERIES

Limited Red Flag Investigation - Hazardous Material Concerns

SR 32, 3.69 Miles West of SR 75 to 0.5 Mile West of I-65

Des. No. 1800060 and 1900361, Passing Lane and Minor Structure Overlay

Boone County, Indiana



	Brownfield		RCRA Generator/TSD		Institutional Controls
	RCRA Corrective Action Sites		Restricted Waste Site		County Boundary
	Confined Feeding Operation		Septage Waste Site		Project Area
	Notice_of_Contamination		Solid Waste Landfill		Half Mile Radius
	Construction/Demolition Site		State Cleanup Site		Toll
	Infectious/Medical Waste Site		Superfund		Interstate
	Leaking Underground Storage Tank		Tire Waste Site		State Route
	Manufactured Gas Plant		Underground Storage Tank		US Route
	NPDES Facilities		Voluntary Remediation Program		Local Road
	NPDES Pipe Locations		Waste Transfer Station		
	Open Dump Waste Site				

Harlan Ford

From: INDOT esd.sam <esd.sam@indot.IN.gov>
Sent: Tuesday, March 8, 2022 2:55 PM
To: Cameron Fraser
Cc: Harlan Ford; Aaron Lawson
Subject: [EXT] RE: ATTN: Nicole Fohey-Breting: SR 32 Roadway Improvements Project in Boone County (DES 1800060 and 1900361)

****** Please use caution this is an externally originating email. ******
Do not click on links or open attachments unless you recognize the sender and know the contents is safe.

Hi Cameron –

Thank you for the updated information regarding Des No. 1800060 and 190361. The update from 1 ft-bgs to 2 ft-bgs of excavation should not be an issue or require additional investigation at the location detailed in the attachment. Including the updated depth of excavation within the CE document appears appropriate, the update does not require an RFI Addendum.

Thank you!
Sincerely,
Nicole

Nicole Fohey-Breting

Site Assessment & Management (SAM) Team Lead
100 North Senate Avenue N758-ES
Indianapolis, Indiana 46204
Office: (317) 416-7084
Email: NFoheyBreting@indot.in.gov
Office Hours: 8 to 4 PM



The Site Assessment and Management (SAM) Manual can be found at
<https://www.in.gov/indot/engineering/environmental-services/environmental-policy/site-assessment-and-management/>

Be sure to refer to the updated information in the SAM Manual for document preparation and submission.

From: Cameron Fraser <cfraser@rqaw.com>
Sent: Monday, March 7, 2022 10:08 AM
To: INDOT esd.sam <esd.sam@indot.IN.gov>
Cc: Harlan Ford <hford@rqaw.com>; Aaron Lawson <alawson@rqaw.com>
Subject: ATTN: Nicole Fohey-Breting: SR 32 Roadway Improvements Project in Boone County (DES 1800060 and 1900361)

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Good Morning,

We have had a change to this project at the Marathon Gas Station Located at the SR 32/SR 75 intersection. This project now includes the installation of a curbed island in front of the gas station under Des No. 2101655 (see attachment for location). The addition to the project is to provide a defined entrance/exit for the gas station, to help reduce conflicts for motorist accessing SR 32 from SR 75. This area was covered under the previously approved RFI and limited RFI. The approved RFI's documented the following:

Limited RFI for Des No.'s 1800060 & 1900361 documented the following UST site:

- UST Sites: Dover Marathon, 7995 SR 32 West (AI ID 1951), is incorrectly mapped within the project area, approximately 1.6 mile east of the SR 32 and SR 75 intersection. The site is actually located adjacent to the project area, in the southeast quadrant of the SR 32 and SR 75 intersection. The station was closed, and four (4) USTs were removed in the early 1990's. There is no closure documentation available. Based on the proposed depth of excavation (i.e. 1 ft-bgs), no impact is expected; however, if the depth of excavation should change, coordination with INDOT SAM will occur.

Full RFI for Des No's 180060 & 1900361 documented the following LUST site:

- LUST Sites: Five (5) LUST sites are located within the 0.5 mile search radius. The nearest LUST site, JD Marathon, 8025 West SR 32 (AI ID 4805), is located approximately 0.30 mile west of the Passing lane 3 project area. Petroleum contamination in the soil and groundwater was discovered during a property transaction in 2006. According to the No Further Action (NFA) Determination issued by IDEM on September 26, 2006, low levels of contamination remains on site at depths ranging from 4 to 6 feet bgs. On June 27, 2019 a suspected release was reported to IDEM. A limited Subsurface Investigation was completed on January 10, 2020. The limited Subsurface Investigation concluded that the extent of subsurface petroleum contamination appears to be minimal and sufficiently delineated. Contamination does not appear to migrate off site. No impact is expected.

The designer is looking into options for the installation of raised curb island and feels he can provide a better/more cost effective option if the depth of excavation was to extend to 2 ft. bgs. (1 ft. for concrete pavement removal **and 1 ft. for soil removal**). However, the designer has options to stay within the 1 ft. excavation limit in this area, if extending the depth of excavation to 2 ft. bgs will cause concerns. We just want to get your input on excavation extending to 2 ft. bgs at this location and see if that would trigger any additional concerns? If there are no additional concerns associated with changing the depth of excavation from 1 ft. bgs. to 2ft. bgs surface at this location, are we okay to note this change in the CE Document?

Thanks,

CAMERON FRASER | NEPA SPECIALIST

O: 317.588.1768

www.rqaw.com

From: Foheybreting, Nicole K <NFoheyBreting@indot.IN.gov>

Sent: Tuesday, December 21, 2021 4:58 AM

To: Cameron Fraser <cfraser@rqaw.com>

Subject: [EXT] RE: [EXT] RE: [EXT] RE: RFI Recommendations for Future Projects

From: INDOT esd.sam <esd.sam@indot.IN.gov>
Sent: Wednesday, December 21, 2022 2:33 PM
To: Harlan Ford
Cc: Aaron Lawson
Subject: RE: Lead Des No. 1800060: SR 32 Passing Lanes and HMA Overlay Project- RFI Addendum Inquiry

Caution: This e-mail originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Thank you for the additional information Harlan –

SAM concurs that an RFI Addendum does not appear warranted given the scope change. Please reach back out to SAM if the scope of work or the extent of the project should change.

Thank you!
Nicole

Nicole Fohey-Breting

*Acting Manager, Environmental Policy Office (EPO)
Site Assessment & Management (SAM) Team Lead
INDOT Environmental Services*

100 North Senate Avenue **N758-ES**
Indianapolis, Indiana 46204

Office: (317) 416-7084

Email: NFoheyBreting@indot.in.gov

Office Hours: 8 to 4 PM



From: Harlan Ford <hford@rqaw.com>
Sent: Tuesday, December 20, 2022 1:01 PM
To: INDOT esd.sam <esd.sam@indot.IN.gov>
Cc: Aaron Lawson <alawson@rqaw.com>
Subject: Lead Des No. 1800060: SR 32 Passing Lanes and HMA Overlay Project- RFI Addendum Inquiry

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Hello INDOT SAM,

We wanted to reach out to your office concerning the need for an RFI addendum for this project. There was one full RFI prepared and one Limited RFI prepared for this project originally. Both the full RFI and LRFI was signed by your office on December 21, 2021 and are now at the 1 year mark. There has been *no substantial* changes to the project since the approval of the RFI and LRFI. The project limits remain the same, but there has been the addition of some small diameter CMP's under residential drives that have been added to the project; however, the project area in the signed RFI and LRFI covers all the added drive pipes. Additionally, the ditch regrading that was to previously occur has been removed from the scope of work and ditches will only be installed along the limits of the 4 passing lanes. RQAW conducted a desktop review of the project area and all GIS layers on 12-20-2022 and found no new resources that would impact the project. Our assessment is that no addendum to the signed RFI or LRFI is necessary. Does INDOT SAM concur that no addendum to the RFI or LRFI is needed for this project?

Please let us know if you need any additional information.

Thank you,



HARLAN FORD

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Categorical Exclusion

Appendix F

Water Resources

**Waters of the U.S. Determination
SR 32: Roadway Improvement Project
Boone County, Indiana
Des. No's. 1800060 & 1900361**

Prepared by: Harlan Ford, RQAW Corporation
Completed Date: September 15, 2021

APPROVED
Justin McDill
9/16/21

Dates of Waters Field Investigation:

A field investigation was conducted on October 7 and 8, 2020, July 6, 2021, and August 26, 2021 by RQAW Corporation to evaluate the presence of *Waters of the United States* for SR 32 Roadway Improvement Project in Boone County, Indiana.

Location:

SR 32

Sections 28, 29, 30, 31, 32, 33, 34, 35 Township 19 North, Range 1 West
Sections 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36 Township 19 North, Range 2 West
Shannondale, Hazelrigg, and Lebanon U.S. Geological Survey (USGS) Quadrangles
Boone County, Indiana

Project Termini:

East Terminus

Latitude: 40.04663 °N
Longitude: -86.49875 °W

West Terminus

Latitude: 40.05470 °N
Longitude: -86.68948°W

National Wetlands Inventory (NWI) Wetlands:

According to the U.S. Fish and Wildlife (USFWS) National Wetlands Inventory (NWI) mapper (<https://www.fws.gov/wetlands/data/mapper.html>) there are multiple NWI polygons located within the 0.5 mile radius of the investigation area. There are 6 NWI polygons within the investigation area. Out of these six, four are classified as RS4BC (Riverine, Intermittent, Streambed, Seasonally Flooded) wetlands. One is confined to the banks of UNT to Little Sugar Creek, one is confined to the banks of Sanitary Ditch, one is confined to Higgins Ditch, and one is confined to the banks of Little Sugar Creek. Additionally, 2 R5UBH (Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded) wetlands were identified within the investigation area. One confined to the banks of Wolf Creek and the other is confined to the banks of Deer Creek. Maps with the USFWS NWI layer turned on is provided in the attachments (pages A27-A29).

According to the United States National Geological Survey (USGS) National Hydrography Dataset (NHD), there are 48 NHD lines within project area. Of these, 8 lines are classified as canal ditch, 2 lines are classified as intermittent, 37 lines are classified as perennial and 1 line is classified as a connector. Maps showing the NHD layer turned on is provided in the attachments (pages A30-A32).

Soils:

According to the Soil Survey Geographic (SSURGO) Database for Boone County, Indiana, the investigation area contains 15 soil areas with nationally listed hydric soils.

<u>Map Abbreviation</u>	<u>Soil Name</u>	<u>Hydric Component Range</u>	<u>Classification</u>
CudA	Crosby silt loam, fine-loamy subsoil, 0 to 2 percent slopes	1 to 32%	Hydric
CxdA	Cyclone silty clay loam, 0 to 2 percent slopes	66 to 99%	Hydric

FdbA	Fincastle silt loam, tipton till plain, 0 to 2 percent slopes	1 to 32%	Hydric
FexC2	Fox loam, 6 to 12 percent slopes, eroded	0%	Not Hydric
MamA	Mahalasville silty clay loam, 0 to 2 percent slopes	66 to 99%	Hydric
MnpB2	Miami silt loam, 2 to 6 percent slopes, eroded	1 to 32%	Hydric
MnpC2	Miami silt loam, 6 to 12 percent slopes, eroded	1 to 32%	Hydric
ObxB2	Ockley silt loam, 2 to 6 percent slopes, eroded	1 to 32%	Hydric
SldAW	Shoals silt loam, 0 to 2 percent slopes, occasionally flooded, very brief duration	1 to 32%	Hydric
SocAW	Sloan silty clay loam, 0 to 1 percent slopes, occasionally flooded, very brief duration	66 to 99%	Hydric
ThrA	Treaty silty clay loam, 0 to 1 percent slopes	66 to 99%	Hydric
UcyA	Urban land-Cyclone silty clay loam complex, 0 to 2 percent slopes	1 to 32%	Hydric
UfgA	Urban land-Fincastle silt loam complex, 0 to 2 percent slopes	1 to 32%	Hydric
UhlA	Urban land-Mahalasville silty clay loam complex, 0 to 2 percent slopes	33 to 65%	Hydric
WofB	Williamstown-Crosby silt loams, 2 to 4 percent slopes	1 to 32%	Hydric
WtaA	Whitaker silt loam, 0 to 2 percent slopes	1 to 32%	Hydric

12 Digit HUC:

Little Creek-Little Sugar Creek: HUC 051201100301

Wolf Creek: HUC 051201100403

Deer Creek-Prairie: HUC 051201100402

Sanitary Ditch-Prairie Creek: HUC 051201100401

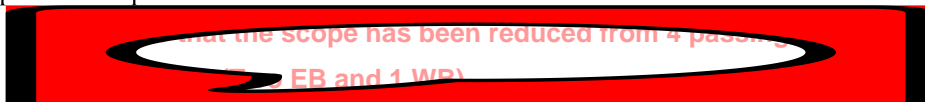


Attachments:

Project Location Maps.....	A1 – A4
Natural Resources Conservation Service (NRCS) Soil Survey Map & Soils Report.....	A5 – A12
StreamStats, Floodway Maps, NWI & NHD Maps, Water Resource Maps.....	A13 – A59
Photograph Location Maps & Photographs.....	A60 – A401
Wetland Determination Forms.....	A402 – A425
Preliminary Jurisdictional Determination Form.....	A426 – A429

Project Description:

The Federal Highway Administration (FHWA) and the Indiana Department of Transportation (INDOT) Crawfordsville District propose to proceed with a roadway improvement project located on State Road (SR) 32 from 3.69 miles W. of SR 75 to 0.5 miles W. of I-65 in Boone County, Indiana. The preferred alternative involves a functional Hot Mix Asphalt (HMA) minor structural overlay and the addition of 4 passing lanes (2 eastbound (EB) and 2 westbound (WB)) that will each be approximately 1 mile long. The HMA overlay project will be located on SR 32 0.05 mi W of SR 75 to 0.5 mi W of I-65 and the added passing lanes project will be located on SR 32 from 3.69 mi W of SR 75 to 2.47 mi W of I-65. The proposed improvements will involve 6.62 miles of mill and resurface and approximately 4 miles of added passing lanes. This project will perpetuate existing drainage where possible. There are several locations where the ditches are no longer defined. Proposed ditches will be developed in these areas during the design process. Also, new ditches will be established and required in the passing lane areas. The proposed cross section for SR 32 within the HMA overlay portion will include two 12 foot wide travel lanes with 3 foot wide paved shoulders. In the 4 areas where the passing lanes will be installed, the cross section will include three 12 foot wide travel lanes with 3 foot paved shoulders. In addition, all small structures within the limits of the 4 passing lane locations will be evaluated during the design phase for replacement. Please refer to the below table for these structures and their location.



No.	Structure Number	Photo Number	Lat/Long	Waterbody/ Wetland	Existing Structure	Length (ft)	Work Type
1	Unnamed	135, 138	40.05390/ -86.53142	N/A	Dual 1.5' Concrete Pipes	47.15	Replacement
2	Unnamed	162, 166	40.05391/ -86.53678	N/A	Dual 1.5' Concrete Pipes	46.96	Replacement
3	Unnamed	332, 336	40.05420/ -86.59711	N/A	Dual 1.25' Concrete pipes	47.3	Replacement
4	Unnamed	363, 367	40.05425/ -86.60852	N/A	Dual 1' Concrete pipes	47	Replacement
5	Unnamed	375, 379	40.05429/ -86.61326	N/A	1.5' Concrete pipe	43.7	Replacement
6	Unnamed	412, 413, 415	40.05442/ -86.63018	N/A	1.5' Concrete pipe	42.45	Replacement
7	Unnamed	421, 424	40.05443/ -86.63190	N/A	2.5' CMP	53	Replacement
8	Unnamed	438, 441	40.05449/ -86.67163	N/A	1.5' Concrete pipe	50.8	Replacement
9	Unnamed	526, 529	40.05465/ -86.67163	N/A	1.25' Concrete Pipe	49.5	Replacement
10	Unnamed	534, 536	40.05465/ -86.67244	N/A	2' CMP	40.1	Replacement
11	Unnamed	553, 557	40.05468/ -86.68357	N/A	1.25' CMP	55.07	Replacement
12	Unnamed	562, 567	40.05468/ -86.68653	N/A	1.25' Concrete pipe	47.15	Replacement
13	CV 032-006-53.38	351, 355	40.05468/ -86.68653	N/A	5' X 3' box	42	Replacement

Field Reconnaissance:

The investigation area includes approximately 10.64 miles of SR 32 from 3.69 miles W. of SR 75 to 0.5 miles W. of I-65. The investigation area is within a predominantly rural area mainly comprised of agricultural land and residential properties throughout. The exception is at the east end of the project terminus where the investigation area becomes

more urban and there is an adjacent industrial park. Small, fragmented stands of trees are present throughout. The entire investigation area was investigated for potential stream and wetland features using USGS Topo and NWI maps.

Streams:

According to the hydrology data available through IndianaMap (<http://www.indianamap.org/>) and Shannondale, Hazelrigg, and Lebanon USGS topographic maps (1:24,000 scale), there are 6 blue line streams mapped within/adjacent the investigation area: Little Sugar Creek, UNT to Little Sugar Creek, Wolf Creek, Deer Creek, Higgins Ditch, and Sanitary Ditch. During the field investigation, the presence of all 6 mapped blue line streams was confirmed to be present. Acres of stream within the investigation area are based on the ordinary high water mark (OHWM) width measurements and total linear feet of stream within the project area. All OHWM measurements were taken outside the influence of the structures. A discussion of each stream is provided below.

Sanitary Ditch (187.60ft. or 0.025 acre within investigation area):

Sanitary Ditch is located on the east end of the project terminus. According to the USGS Topo map, Sanitary Ditch is a mapped blue line perennial stream. According to the USGS StreamStats report, this stream has an upstream drainage area of 6.427 square miles with a gradient of 4.63 feet per mile. This stream flows in a south to north direction and was visually observed to be flowing on the day of field investigation. No rooted plants were observed in the streambed and the channel was free of any debris or sediment build up, both of which are characteristics that this stream has constant flow to prevent debris accumulation and/or rooted plants from establishing in the streambed (photos 1-3, 6, & 7). Therefore, it was determined that this stream has perennial flow. The downstream OHWM measured 5ft. wide and 4 inches deep approximately 15ft. north of the structure. The upstream OHWM measured 6ft. wide and 4 inches deep approximately 15 ft. south of the structure. The substrate consisted primarily of artificial (riprap), and gravel. This stream exhibited average quality as it did exhibit overhanging vegetation, and riffle/pool complexes, but the lack of sinuosity, and contribution of roadside and agricultural drainage detracts from the overall quality. Sanitary Ditch flows into Prairie Creek, which flows into Sugar Creek, which then flows into the Wabash River, a Traditionally Navigable Waterway (TNW). Based on its contribution of perennial flow into a TNW, Sanitary Ditch is likely to be considered a *Waters of the United States*.

Deer Creek (44.10ft. or 0.003 acre within investigation area):

Deer Creek is located approximately 1,300ft. east of the SR 32/CR 250 W. intersection. According to the USGS Topo map, Deer Creek is a mapped blue line intermittent stream that originates on the north side (outlet of structure) of SR 32. According to the USGS StreamStats report, this stream has an upstream drainage area of 0.421 square miles but has an undetermined gradient. On the inlet side of the structure no stream channel was observed. The inlet side consisted of a riprap lined depression that collects drainage from the roadside and adjacent farm field. On the outlet side, the stream channel becomes evident and flows south to north. During the field investigation it was determined that this stream has ephemeral flow as it has a significant amount of rooted plants within the streambed (photos 50 & 51), no flowing water was observed, and no rain events had occurred within the last 48 hours. No downstream OHWM was taken as no stream is present on the inlet side of the structure. The OHWM measured 3ft. wide and 4 inches deep approximately 15ft. north of the structure. The substrate of this stream consisted of silt and was heavily vegetated. This stream would be considered poor quality as it has a predominantly silt and vegetated substrate, contribution of roadside and agricultural field run-off, and channelization. Deer Creek flows into Prairie Creek, which flows into Sugar Creek, which then flows into the Wabash River, a TNW. Based on its contribution of ephemeral flow into a TNW, Deer Creek is likely to be considered a *Waters of the United States*.

Wolf Creek (118.06ft. or 0.013 acre within investigation area):

Wolf Creek is located 1,700ft west of CR 500 W/SR 32 intersection. According to the USGS Topo map, Wolf Creek is a mapped blue line perennial stream. According to the USGS StreamStats Report, this stream has an upstream drainage area of 6.697 square miles but has a undetermined gradient. This stream flows in a south to north direction under SR 32 and was visually observed to be flowing during the field investigation. There was some sedimentation

build up that was allowing some vegetation to establish in the channel and the channel had some debris and leaf litter build up on the streambed, which are characteristics that this stream does not have constant and sufficient flow to prevent debris accumulation and/or rooted plants from establishing in the streambed (photos 253, 256-257). Therefore, it was determined that this stream has intermittent flow. The downstream OHWM measured 3ft. wide and 3 inches deep approximately 15ft. north of the structure. The upstream OHWM measured 5ft. wide and 4 inches deep approximately 15ft. south of the structure. The substrate of Wolf Creek consisted primarily of artificial (riprap), and silt. This stream exhibited average quality due to overhanging vegetation and presence of riffle/pool complexes but the contribution of roadside and agricultural drainage detracts from the overall quality. Wolf Creek flows into Sugar Creek, which then flows into the Wabash River, a TNW. Based on its contribution of intermittent flow into a TNW, Wolf Creek is likely to be considered a *Waters of the United States*.

Little Sugar Creek (2,677.75ft. or 0.184 acre within investigation area):

Little Sugar Creek is located approximately 900ft. west of the CR N. 600W/SR 32 intersection. According to the USGS Topo map, Little Sugar Creek is a mapped blue line intermittent stream originating on the north side of SR 32. According to the USGS StreamStats Report, Little Sugar Creek has a drainage area of 1.957 miles and a gradient of 9.58 feet per mile. Little Sugar Creek originates north of Structure No. CV 032-006-54.25 and flows southwest underneath SR 32 before turning west along the southside of SR 32. At this point, this stream flows in a east to west direction along SR 32 for approximately 1,800 feet before turning northwest and crossing under SR 32 via Structure No. CV 032-006-53.90. The inlet side of Structure No. CV 032-006-54.25 (where the stream originates consisted of a depressional area that conveys roadside and farm field drainage. Wetland C is adjacent to the inlet of Structure No. CV 032-006-54.25. During the field investigation it was determined that this stream has intermittent flow as it has clearly defined OHWM and rooted plants exist within the streambed, both of which, are characteristics of intermittent streams. Some in-stream features were observed which is likely due to sediment build up that is hindering the flow of the stream and allowing hydrophytic vegetation (such as *Typha angustifolia* and *Phalaris arundinacea*) to grow within the stream channel (photos 304-306 and 321). No rain events had occurred in 48 hours prior to the field investigation and water was observed in the stream channel, albeit with little flow where it originates (due to sediment build up). The flow of this stream increases as it moves further west along the south side of SR 32 as evident in photos 309 and 310.

Little Sugar Creek turns northwest flowing under SR 32 approximately 250ft. east of CR 650 W at Structure No. CV 032-006-53.90. The downstream OHWM measured 3ft. wide and 6 inches deep approximately 15ft south of the Structure No CV 032-006-53.90. The upstream OHWM measured 2.5ft. wide and 4 inches deep approximately 20ft. north of Structure No CV 032-006-53.90. The substrate of this stream consisted primarily of silt, with some areas of established vegetation in the streambed. This stream would be considered poor quality as it has a predominantly silt substrate, contribution of roadside and agricultural field run-off, and water opacity was cloudy. Little Sugar Creek flows into Sugar Creek, which flows into the Wabash River, a TNW. Based on its contribution of intermittent flow into a TNW, Little Sugar Creek is likely to be considered a *Waters of the United States*.

Higgins Ditch (116.01ft. or 0.026 acre within investigation area):

Higgins Ditch is located approximately 900ft. west of the SR 75/SR 32 intersection. According to the USGS Topo map, Higgins Ditch is a mapped blue line perennial stream. According to the USGS StreamStats Report, this stream has an upstream drainage area of 2.426 miles and a gradient of 11.6 feet per mile. This stream flows in a south to north direction under SR 32 and was visually observed to be flowing during the field investigation. This stream was determined to have perennial flow as no rooted plants were observed in the streambed, and the channel was free of any debris or sediment build up, both of which are characteristics of perennial streams. The downstream OHWM measured 9.2ft. wide and 8 inches deep taken approximately 15ft. south of the structure. The upstream OHWM measured 10ft. wide and 1ft. deep taken approximately 15ft. north of the structure. The substrate consisted primarily of cobble and silt; however, there was some artificial (riprap) present at the structure. This stream exhibited average quality due to overhanging vegetation, riffle-pool complexes, and cobble/silt substrate. However, there was an abundance of common

duckweed (*Lemna minor*) observed on the water surface upstream of the structure (photos 397 & 398). This is likely due to nutrient enrichment of the stream as a result of farm field runoff which detracts from the overall quality of the stream. Higgins Ditch flows into Little Sugar Creek, which flows into Sugar Creek, which then flows into the Wabash River, a TNW. Based on its contribution of perennial flow into a TNW, Higgins Ditch is likely to be considered a *Waters of the United States*.

UNT to Little Sugar Creek (162.70ft. or 0.011 acre within investigation area):

UNT to Little Sugar Creek is located approximately 350ft. west of the CR N. 1050 W/SR 32 intersection. According to the USGS Topo map UNT to Little Sugar Creek is a mapped blue line intermittent stream. According to the USGS StreamStats map, UNT to Little Sugar Creek has an upstream drainage area of 2.273 square miles and a gradient of 17.4 feet per mile. Some rooted plants were also observed within portions of the stream channel (photo 514) which is indicative of intermittent streams during the fall months when the water table is typically low and does not provide constant flow to deter plant establishment within the channel. Flowing water was observed on the day of the field investigation without any prior rain events within 48 hours. Therefore, this stream was determined to have intermittent flow. The downstream OHWM measured 3ft wide and 3 inches deep approximately 10 ft. north of the structure. The upstream OHWM measured 2.5ft wide and 3 inches deep approximately 10ft. south of the structure. There are two scour holes present on both the upstream and downstream sides of the structure (photos 513-514, 516, and 519). The OHWM measurements were taken outside the scour holes. The substrate consisted primarily of silt with some vegetation. This stream exhibited poor quality due to the lack of sinuosity, primarily silt substrate, murky water, and contribution of roadway and agricultural field runoff. UNT to Little Sugar Creek flows into Little Sugar Creek, which flows into Sugar Creek, which flows into the Wabash River which is a TNW. Based on its contribution of intermittent flow to a TNW, UNT to Little Sugar Creek is likely to be considered a *Waters of the United States*.

Wetlands

Wetland boundaries were determined based on the vegetation present and landscape (i.e. flat versus sloped terrain). The boundaries were recorded via a GIS unit. Wetland type was determined by the dominant plant species. Wetlands within roadside ditches were considered to extend outside the ditch and up the roadway embankment if a field tile or culvert was clogged and provided enough moisture for wetland conditions to persist.

Wetland A (0.022 acre)

Wetland A is located within RSD 5 on the east side of CR 250 W. This wetland likely formed due to poor drainage from a clogged culvert pipe underneath CR 250 W. This wetland would likely be a freshwater emergent (PEM) wetland with a dominance of herbaceous vegetation. Wetland A would likely be considered poor quality due to the disturbance from the roadway and its relatively small size. The eastern boundary of Wetland A was determined as the area would not pass the wetland hydrology criterion and the dominant vegetation at this location (shown in photo 65) consisted of Kentucky bluegrass (*Poa pratensis*, FAC) and tall fescue (*Schedonorus arundianceus*, FACU), which would not pass the hydrophytic vegetation criterion. Wetland A would likely be considered a Waters of the State and under the jurisdiction of IDEM as there is no known connection to a TNW and it is not directly abutting a stream or within a floodplain to a likely *Waters of the United States*. However, INDOT is requesting the USACE to take jurisdiction over this wetland.

Datapoint A1 is considered to be within a wetland. The dominant vegetation consisted of yellow foxtail (*Setaria pumila*; FAC) and narrowleaf cattail (*Typha angustifolia*; OBL). This datapoint also exhibited a hydric soil indicator (Depleted Matrix; F3). In addition, this datapoint also exhibited two secondary hydrology indicators (Drainage Patterns; B10 and FAC-Neutral Test; D5).

Datapoint A2 did not exhibit all three criteria to be considered within a wetland. This datapoint passed the dominance test with dominant vegetation consisting of yellow foxtail (*Seteria pumila*; FAC). However, this data point failed to

meet the hydric soils criterion and did not exhibit any wetland hydrology indicators. Therefore, datapoint A2 was not considered to be within a wetland.

Wetland B (0.001 acre)

Wetland B is located within the investigation on the west side of CR 250 W. This wetland likely formed due to poor drainage from a clogged culvert pipe underneath CR 250W. This wetland would likely be a freshwater emergent (PEM) wetland with a dominance of herbaceous vegetation. Wetland B would likely be considered poor quality due to the disturbance from the roadway and its relatively small size. Wetland B would likely be considered a Waters of the State and under the jurisdiction of IDEM as there is no known connection to a TNW and it is not directly abutting a stream or within a floodplain to a likely *Waters of the United States*. However, INDOT is requesting the USACE to take jurisdiction over this wetland.

Datapoint B1 is considered to be within a wetland. The dominant vegetation consisted of yellow nutsedge (*Cyperus esculentus*; FACW), Kentucky blue grass (*Poa pratensis*; FAC) and narrowleaf cattail (*Typha angustifolia*; OBL). This datapoint also exhibited a hydric soil indicator (Depleted Dark Surface; F7). In addition, this datapoint also exhibited two secondary hydrology indicators (Drainage Patterns; B10 and FAC-Neutral Test; D5).

Datapoint B2 did not exhibit all three criteria to be considered within a wetland. This datapoint passed the dominance test with dominant vegetation consisting of Kentucky blue grass (*Poa pratensis*; FAC) and yellow foxtail (*Setaria pumila*; FAC). However, this data point failed to meet the hydric soils criterion and did not exhibit any wetland hydrology indicators. Therefore, datapoint B2 was not considered to be within a wetland.

Wetland C (0.005 acre)

Wetland C is located within a depressional area just east of Little Sugar Creek. This wetland likely formed due to the constant moisture provided by buried field tiles. This wetland would likely be a freshwater emergent (PEM) wetland with a dominance of herbaceous vegetation. Wetland C would likely be considered poor quality due to the disturbance from the roadway, lack of cover, and its relatively small size. In addition, multiple attempts were made to collect datapoints C1 and C2; however, both were difficult to gather due to the presence of concrete, rebar, brick, and/or roadside fill. Wetland C would likely be considered a *Waters of the United States* as it is within the floodplain of Little Sugar Creek, which is also likely a *Waters of the United States*.

Datapoint C1 is to be considered within a wetland. The dominant vegetation consisted of narrowleaf cattail (*Typha angustifolia*; OBL) and reed-canary grass (*Phalaris arundinacea*; FACW). This datapoint also exhibited a hydric soil indicator (Redox Dark Surface; F6) although a restrictive layer (concrete, rebar, brick) was encountered at 9 inches. In addition, this datapoint also exhibited two secondary hydrology indicators (Drainage Patterns; B10 and Geomorphic Position; D2).

Datapoint C2 did not exhibit all three criteria to be considered within a wetland. Dominant vegetation consisted of Kentucky blue grass (*Poa pratensis*; FAC) and yellow foxtail (*Setaria pumila*; FAC). A restrictive layer was encountered at 9 inches consisting of roadside fill and this data point failed to meet the hydric soils criterion. In addition, this datapoint did not exhibit any wetland hydrology indicators; therefore, datapoint C2 was not considered to be within a wetland.

Wetland D (0.011 acre)

Wetland D is located within the investigation on the east side of CR 1050 W at the inlet of CV 032-006-49.90. This wetland likely formed due to poor drainage through the structure due to heavy sediment build up. This wetland would likely be a freshwater emergent (PEM) wetland with a dominance of herbaceous vegetation. Wetland D would likely be considered poor quality due to the disturbance from the roadway, lack of cover, and its relatively small size. Wetland D would likely be considered a *Waters of the United States* as it is hydrologically connected to Wetland E via Structure

No. CV 032-006-49.90 which is also likely considered to be a *Waters of the United States* as it within the floodplain of UNT to Little Sugar Creek.

Datapoint D1 is to be considered within a wetland. The dominant vegetation consisted of narrowleaf cattail (*Typha angustifolia*; OBL). This datapoint also exhibited a hydric soil indicator (Redox Dark Surface; F6). In addition, this datapoint also exhibited one primary hydrology indicator (Saturation; A3) and one secondary hydrology indicator (Drainage Patterns; B10).

Datapoint D2 did not exhibit all three criteria to be considered within a wetland. Dominant vegetation consisted of Kentucky blue grass (*Poa pratensis*; FAC). However, this data point failed to meet the hydric soils criterion and did not exhibit any wetland hydrology indicators. Therefore, datapoint D2 was not considered to be within a wetland.

Wetland E (0.054 acre)

Wetland E is located within the investigation on the west side of CR 1050 W at the inlet of CV 032-006-49.90. This wetland likely formed due to poor drainage through the structure due to heavy sediment build up. Wetland E extends within RSD 26 and drains into UNT to Little Sugar Creek. This wetland would likely be a freshwater emergent (PEM) wetland with a dominance of herbaceous vegetation. Wetland E would likely be considered poor quality due to the disturbance from the roadway and lack of cover. Wetland E would likely be considered a *Waters of the United States* as it is within the floodplain of UNT to Little Sugar Creek, which is also likely a *Waters of the United States*.

Datapoint E1 is to be considered within a wetland. The dominant vegetation consisted of narrowleaf cattail (*Typha angustifolia*; OBL), spotted lady's thumb (*Persicaria maculosa*; FACW), and Kentucky blue grass (*Poa pratensis*; FAC). This datapoint also exhibited a hydric soil indicator (Sandy Redox; S5). In addition, this datapoint also exhibited two secondary hydrology indicators (Drainage Patterns; B10 and FAC-Neutral Test; D5).

Datapoint E2 did not exhibit all three criteria to be considered within a wetland. Dominant vegetation consisted of Kentucky blue grass (*Poa pratensis*; FAC). However, this data point failed to meet the hydric soils criterion and did not pass the wetland hydrology criterion as it only met one secondary hydrology indicator (FAC-Neutral Test, D5). Therefore, datapoint E2 was not considered to be within a wetland.

It is important to note that the dominant vegetation shifts from narrowleaf cattails (*Typha angustifolia*; OBL) to reed canary grass (*Phalaris arundinacea*; FACW) and late goldenrod (*Solidago gigantea*; FACW) which is visible in photos 507 and 508. Although the vegetation shifted since it remained hydrophytic, other datapoints were taken. The vegetation shift is visible in photos 507 and 508.

Upland Data Points:

Two upland datapoints were taken as proof of absence points based on visual observation of hydrophytic vegetation in conjunction with visible wetland hydrology indicators. These two datapoints are described below.

Datapoint UP1: This datapoint was taken just south of Structure No. CV 032-006-53.38. The dominant vegetation observed at this datapoint was curly doc (*Rumex crispus*, FAC) and therefore it passed the hydrophytic vegetation criterion. In addition, this datapoint passed the hydrology criterion by exhibiting two secondary indicators (Surface Soil Cracks, B6) and (Drainage Patterns, B10). However, this datapoint failed to exhibit hydric soils; therefore, it was determined that datapoint UP1 was not within a wetland.

Datapoint UP2: This datapoint was taken just southwest of Unnamed Structure 12. The dominant vegetation observed at this datapoint was barnyard grass (*Echinochloa crus-gali*, FACW) and therefore it passed the hydrophytic vegetation criterion. In addition, this datapoint passed the hydrology criterion by exhibiting two secondary indicators (Surface

Soil Cracks, B6) and (Drainage Patterns, B10). In summary, this datapoint failed to exhibit hydric soils; therefore, it was determined that datapoint UP2 was not within a wetland.

Open Water:

No open water features were observed within the investigation area.

Roadside Ditches:

Thirty (30) Roadside ditches (RSD's) were observed throughout the investigation area and were reviewed for potential water resources. All roadside ditches lacked OHWM and/or wetland characteristics; therefore, they were considered to be non-jurisdictional features.

Erosional Features:

Three erosional features were found during within the investigation area and were reviewed for potential water resources. See below description of each Erosional Feature found within the investigation area.

Erosional Feature 1: This erosional feature was found just north of the inlet of Unnamed Structure 1. It appears to carry sheet flow from the adjacent farm field to the north. Erosional Feature 1 was not found out the outlet of the structure. Erosional Feature 1 lacked OHWM and/or wetland characteristics; therefore, it was considered to be a non-jurisdictional feature.

Erosional Feature 2: This erosional feature was found just south of the outlet of CV 032-006-53.38. Erosional Feature 2 was not present at the inlet of the structure. Erosional Feature 2 lacked OHWM and/or wetland characteristics; therefore, it was considered to be a non-jurisdictional feature.

Erosional Feature 3: This erosional feature was found just south of the inlet of Unnamed Structure 7. Erosional Feature 3 was not found out the outlet of the structure. Erosional Feature 3 lacked OHWM and/or wetland characteristics; therefore, it was considered to be a non-jurisdictional feature.

**Table 1: Stream Summary
SR 32: Roadway Improvement Project
Des. No's. 1800060 & 1900361
Boone County, Indiana**

Stream Name	Photos	Lat/Long	OHWB Width (feet)	OHWB Depth (feet)	USGS Blue-line?/Flow	Riffles/Pools?	Substrate	Flow Regime	Quality	Likely Water of U.S.?
Sanitary Ditch	1-3, 6-7, 9	40.04674, -86.49890	6	0.3	Yes/Perennial	Yes	Artificial, Gravel	Perennial	Average	Yes
Deer Creek	49-50-51	40.04672, -86.51357	3	0.3	Yes/Intermittent	No	Silt, Vegetated	Ephemeral	Poor	Yes
Wolf Creek	252-253, 256-257	40.05416, -86.56954	5	0.3	Yes/Perennial	Yes	Artificial, Silt	Intermittent	Average	Yes
Little Sugar Creek	300-301, 304-306, 309-311, 315-317, 320-323	40.05417, -86.58984	3	0.5	Yes/Intermittent	No	Silt, Vegetated	Intermittent	Poor	Yes
Higgins Ditch	396-400	40.05449, -86.62284	10	1	Yes/Perennial	Yes	Cobble, Silt, Artificial	Perennial	Average	Yes
UNT to Little Sugar Creek	511-514, 516, 518-519	40.05472, -86.66828	3	0.25	Yes/Intermittent	No	Silt, Vegetated	Intermittent	Poor	Yes

Table 2: Wetland Summary
SR 32: Roadway Improvement Project
Des. No's. 1800060 & 1900361
Boone County, Indiana

Wetland Name	Photos	Lat/Long	Type	Wetland Quality	Total Area (acres)	Likely Water of U.S.?
Wetland A	66-69, 73-75	40.04682° N -86.51822° W	PEM	Poor	0.022	Yes
Wetland B	77, 79-82	40.04682° N -86.51847° W	PEM	Poor	0.001	Yes
Wetland C	293, 295- 296, 299-301	40.05429° N -86.58506° W	PEM	Poor	0.005	Yes
Wetland D	491-496, 498	40.05473° N -86.66690° W	PEM	Poor	0.011	Yes
Wetland E	501-508, 511	40.05473° N -86.66769° W	PEM	Poor	0.054	Yes

Table 3: Data Point Summary
SR 32: Roadway Improvement Project
Des. No's. 1800060 & 1900361
Boone County, Indiana

Data Point	Vegetation?	Hydric Soil	Wetland Hydrology	Wetland
A1	Yes	Yes	Yes	Yes
A2	Yes	No	No	No
B1	Yes	Yes	Yes	Yes
B2	Yes	No	No	No
C1	Yes	Yes	Yes	Yes
C2	Yes	No	No	No
D1	Yes	Yes	Yes	Yes
D2	Yes	No	No	No
E1	Yes	Yes	Yes	Yes
E2	Yes	No	No	No
UP1	Yes	No	Yes	No
UP2	Yes	No	Yes	No

Conclusions:

A field investigation was conducted on October 7 and 8, 2020, July 6, 2021, and August 26, 2021 by RQAW Corporation to evaluate the presence of *Waters of the United States* for SR 32 Roadway Improvement Project in Boone County, Indiana.

Sanitary Ditch, Deer Creek, Wolf Creek, Little Sugar Creek, Higgins Ditch, and UNT to Little Sugar Creek would all likely be considered *Waters of the United States* since they all contribute either ephemeral, intermittent, or perennial flow to the Wabash River, a TNW, in a typical year. Wetlands C, D, and E are likely to be considered *Waters of the United States* based on their hydrological connection to one of the afore mentioned likely *Waters of the United States*.

Two wetlands (A and B) would likely be considered Waters of the State and likely under the jurisdiction of IDEM as there is no known connection to a TNW and they do not directly abut a stream or located within a floodplain to a likely *Waters of the United States*. However, INDOT is requesting the USACE to take jurisdiction over these wetlands.

Every effort should be taken to avoid and minimize impacts to these waterways. If impacts are necessary, then mitigation may be required. The INDOT Ecology and Waterway Permitting Section should be contacted immediately if impacts will occur. The final determination of jurisdictional waters is ultimately made by the U.S. Army Corps of Engineers. This report is our best judgement based on the guidelines set forth by the Corps.

Acknowledgement:

This waters determination has been prepared based on the best available information, interpreted in the light of the investigator's training, experience and professional judgement in conformance with the 1987 Corps of Engineers Wetlands Delineation Manual, the appropriate regional supplement, the USACE Jurisdictional Determination Form Instructional Guidebook, and other appropriate agency guidelines.

Prepared by:



9/15/21

Harlan Ford
Environmental Scientist
RQAW | Environmental Department
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NRCS Soil Map
 SR 32: Roadway Improvement Project
 Des. No. 1800060 & 1900361
 Boone County, Indiana



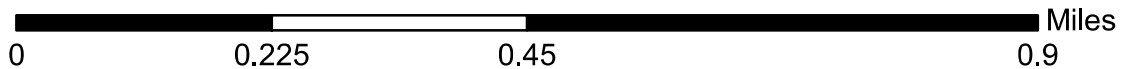
Legend

- Investigation Area
- Map Extent
- Active Extent
- NRCS Soils: Boone County

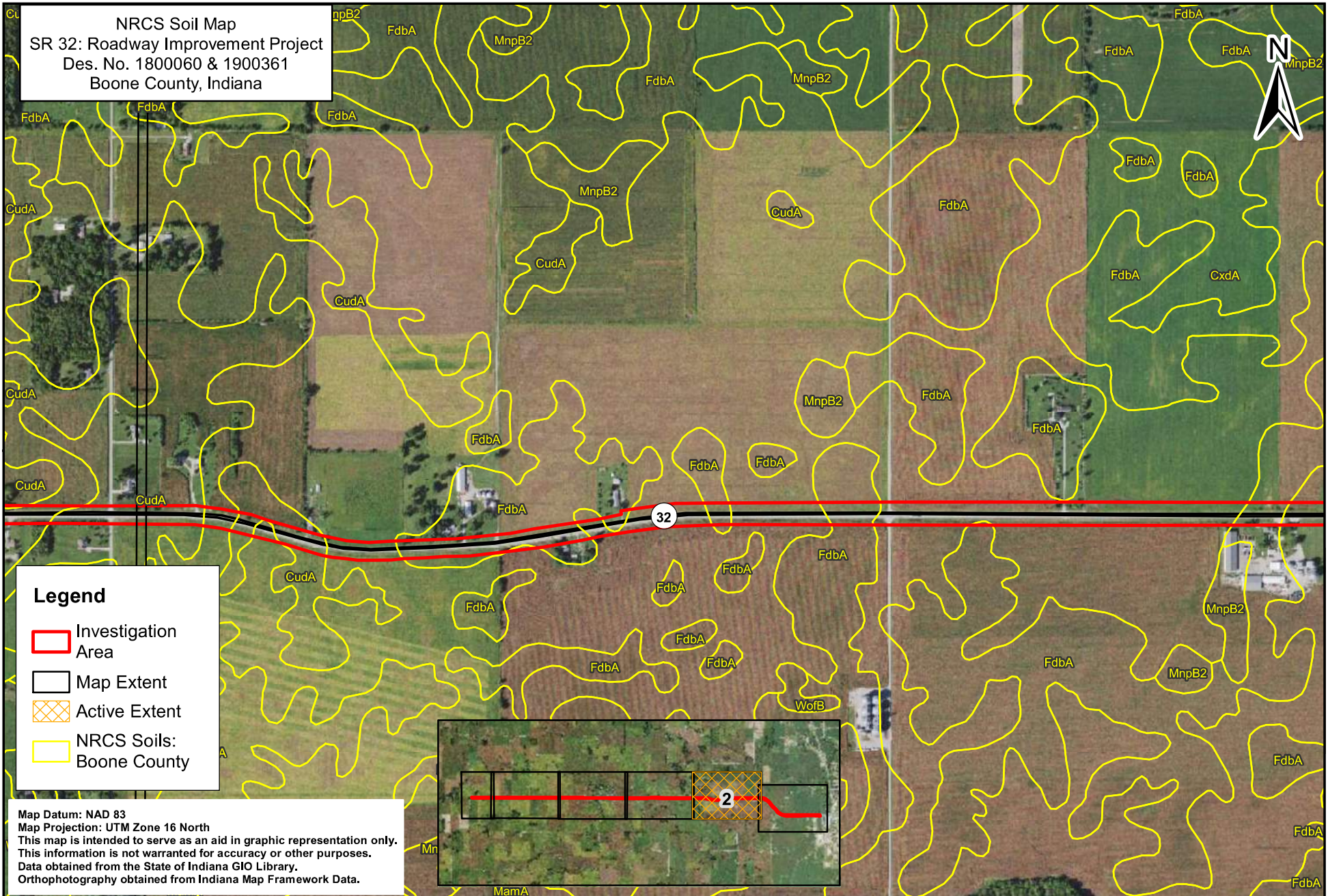
Map Datum: NAD 83
 Map Projection: UTM Zone 16 North
 This map is intended to serve as an aid in graphic representation only.
 This information is not warranted for accuracy or other purposes.
 Data obtained from the State of Indiana GIO Library.
 Orthophotography obtained from Indiana Map Framework Data.



NRCS Soil Map 1 of 6



Location: SR 32
 Township: Jefferson & Center
 County: Boone
 Date: 05/25/21



0 0.225 0.45 0.9 Miles